

# The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1531.—Vol. XXXIV.

LONDON, SATURDAY, DECEMBER 24, 1864.

(STAMPED.....SIXPENCE.  
UNSTAMPED.....FIVEPENCE

## MR. JAMES CROFTS, SHAREBROKER, No. 1, FINCH LANE, CORNHILL.

(Established 22 years.)  
Mr. Crofts transacts business in the way of PURCHASE or SALE, in every description of stocks, but particularly in BRITISH MINES.  
Holders of mining shares DIFFICULT OF SALE in the OPEN MARKET may find purchasers by negotiation, through Mr. Crofts' agency. Also, parties requiring ADVISE how to act as to the DISPOSAL, or ABANDONMENT, of doubtful mining stocks may profitably avail of Mr. Crofts' long experience on the market in all cases of doubt or difficulty.

FOR SALE, AT LOWEST MARKET PRICES (net):—15 Mandlin, £6; 15 Crane, £2½; 40 South Darren, 40s.; 1 East Basset, £49½; 40 North Chiverton, 2½; 20 Frank Mills, £2½ (samples of ore increasing); 25 Wheel Chiverton, £2½; 20 East Russell, £2½ (call paid); 25 East Vor, £2½; 20 Crebor, 42s.; 250 Vale of Towry, 4s. 3d.; 25 Grenville, £4½; 20 Lady Bertha, 11s. 6d.; 20 East Wheel Grenville, £4½; 20 East Laxey, £1½; Wendron Consols (very cheap); Great Caradon (an offer); East Trekerby (very cheap); 50 Scottish Australian (17s. 6d. paid); 25 North Trekerby, 38s. 6d.; 100 Original Shares Library Company (Limited); 70 Wheel Hartley, 2s. 6d.

## MR. JAMES LANE, No. 44, THREADNEEDLE STREET, LONDON, E.C.

JAMES LANE has FOR SALE at net prices:—5 Basset and Grylls; 3 Buller, £11½; 50 Redol-Aur, 9s. 6d.; 20 Bryntail, £2½; 50 Crebor, 40s. 6d.; 20 Crever and Abraham, 10s. 6d.; 50 Calstock Consols, 8s.; 20 Carn Camborne, 27s. 6d.; 20 East Lovell; 20 East Rosewarne, £3; 20 East Russell, £2; 40 East Seton, 1s. 6d.; 10 East Chiverton, 30s.; 25 Great Wheel Vor, £2½; 20 Hallenbeagle, £4; 20 Lady Bertha, £1; 20 Mandlin, £6; 20 North Trekerby, £2½; 5 North Basset, 30s.; 10 North Granbler, £2½; 50 North Devon, 42s.; 50 New Wheel Martha, 27s. 6d.; 100 Okel Tor, 12s. 6d.; 50 South Grenville, 9s.; 100 Tin Hill, 30s.

## MR. WILLIAM LELEAN BUYS AND SELLS all descriptions of ENGLISH AND FOREIGN STOCKS AND SHARES, INSPECTS MINES, and TRANSACTS all the usual BUSINESS of a STOCK and SHAREDEALER. Parties may rely upon him for sound advice and punctuality in all his engagements.

Mr. Lelean has FOR SALE:—15 Mandlin, 9 Great Laxey, 2 Providence, 25 Bedford United, 20 Crever Wheel Abraham, 2 St. Ives Consols, 2 West Wheel Seton, 20 North Trekerby, 20 North Chiverton, 20 South Wheel Basset, 20 South Darren, 40 West Wheel Jane, 20 East Rosewarne, 10 North Croft, 20 East Laxey, 50 Great South Chiverton, 10 Boscawell, 10 East Trekerby, 10 Trelyon Consols, 50 Rosewarne Consols, 60 North Great Work, 70 Wheel Emma, 25 Trimpley Hall, 25 Vale of Towry, 100 Hawkmoor, 20 Wheel Curtis, 10 East Carn Brea, 75 Great Caradon, 10 Siltney and Carmel, 20 East Chiverton, 2 Darren, 25 East Providence, £2½; 250 North Miners, 2s. 6d.; 1 Levant, and 1 Botalack.

I refer my correspondents to my letter in this day's Journal, page 900.  
Bankers: Messrs. Roberts, Lubbock, and Co.  
Office, 11, Royal Exchange, London, E.C.

## JOHN B. REYNOLDS, 2, HATTON COURT, THREADNEEDLE STREET, LONDON, E.C.

Recommends for investment East Wheel Vor, Cook's Kitchen, and Stray Park shares, with several others, many of which are not now dealt in, but which have been very often in great demand, and which will be in considerable request again.

## WILLIAM WARD, 29, THREADNEEDLE STREET, LONDON, E.C.

## MR. WM. BIRDSEY, MINE AND SHAREBROKER, No. 2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.

## MR. THOS. THOMPSON, MINING OFFICES, 12, OLD JEWRY CHAMBERS, LONDON, E.C.

## WILLIAM SEWARD, 19, THROGMORTON STREET, LONDON, E.C.

## JOHN RISLEY, 32, LOMBARD STREET, LONDON, E.C. SHARES IN MINES BOUGHT AND SOLD on commission, at 1¼ per cent., for immediate cash. Bankers: London and Westminster, Lothbury.

## MR. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, E.C., has FOR SALE:—

Birch Tor & Vifler, £2.	East Russell, £4½.	Lady Bertha, 15s. 6d.
Buller, £12.	East Grenville, £4½.	Marke Valley, £5½.
Chiverton, £2½.	East Vor, £2.	South Tolgas, £20½.
Cutter's, £3½.	East Lovell, £1½.	Wheel Seton, £200.
Camborne Vein, £2½.	Frank Mills, £5½.	Wheel Crebor, £2.
East Basset, £49.	Hington, £3 17s. 6d.	West Maria, £2½.
East Carn Brea, £6 13 9	Kelly Bray, 16s.	West Caradon, £9.

And is a BUYER of:—  
East Russell, £4½.  
West Caradon, £9½.  
T. ROSEWARNE is a SELLER of the following shares, for time on, at prices below present market value:—  
Glasgow Caradon.  
East Basset.  
December 23, 1864.  
Bankers: Bank of London.

## JAMES HUME, 74, OLD BROAD STREET, LONDON, E.C., AND MINING EXCHANGE.

Friday—Closing Prices.	Friday—Closing Prices.
East Grenville.....£ 4½-4½	Great Vor (ex div.).....£2½-2½
East Grenville.....16-16½	Crebor.....39s-41s.
East Chiverton.....52-54	South Condurrow (call paid) 1½-1½
East Lovell.....12½-13	East Carn Brea.....6½-6½
East Russell.....4½-5	New Wendron.....3½

J. Hume's "Circular" for November is now ready, and contains most valuable information on some of the leading mines likely to have a great rise. Subscription 6s. per annum. 6d. per copy.  
Business transacted at closest stock prices.  
Bankers: London Joint-Stock Bank.

## MR. JOHN BATTERS, STOCK AND MINING SHAREBROKER, 13, THROGMORTON STREET, LONDON, E.C., is in a position to give sound advice as to the sale or purchase of mining shares, the present being one of the most favourable opportunities for speculation or investment to result in large profits. List free on application.

FOR SALE:—10 East Russell, £2; 30 East Wheel Vor, £2½; 1 East Basset, £49½; 20 North Basset, 25s.; 15 South Darren, 37s. 6d.  
BUYER of East Wheel Russell, Chiverton, and Central Miners. State number and lowest price.

## GEORGE RICE, 5, COWPER'S COURT, BIRCHIN LANE, LONDON, E.C. (22 years' experience), Member of the Mining Exchange, has SPECIAL BUSINESS, as BUYER or SELLER, in the following:—

Closing quotations.	Closing quotations.
Birch Tor (New).....£ 1½-2	East Wheel Grenville.....£4 6-4 8 9
Clifford Amalgamated.....31½-32	Great Wheel Vor.....33½-32½
Chiverton.....5½-6	Marke Valley.....5½-6½
East Russell (call paid).....4½-5	North Trekerby.....2-2½
East Carn Brea.....6½-6½	Wheel Crebor.....37s-38s. 6d.
East Caradon.....12½-13	Wheel Grenville.....4-4½
East Wheel Lovell.....12½-12½	West Chiverton.....52-54
East Wheel Vor.....36s-2	

BUYER for cash down, at highest prices, of East Lovell, Chiverton, Devon (Colcharton), East Carn Brea, East Caradon, East Grenville, Great Vor, Marke Valley, Wheel Crebor, and West Chiverton. State number in each mine.  
Shareholders and speculators can always learn from Geo. Rice what shares to buy, sell, or avoid. He does not publish his opinions, and is therefore free to give sound and independent advice.  
Geo. Rice can recommend a few shares for a certain rise in 1865.  
Money advanced on mining shares.  
Dec. 23, 1864.  
Bankers: Bank of London.

## MR. WALTER TREGELLAS, 3, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C., has BUSINESS in the FOLLOWING MINES:—Santa Barbara, Frontino and Bolivia Gold, Great Wheel Vor, North Shepherds, East Caradon, and North Rosear.

W. TREGELLAS strongly recommends the above mines for immediate purchase, as these shares will pay good interest for money at present quotations.

## MR. GEORGE BUDGE, SHAREDEALER, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 17 years), has FOR SALE at net prices:—50 Mandlin; 100 Welsh Gold, 18s.; 50 Frontino and Bolivia, 22s. 6d.; 75 North Miners pref., 1s. 6d.; 200 Anglo-Brazilian; 100 Don Pedro; 120 Nova Scotia; 140 Hawkmoor, 2s.; 100 Bottle Hill, 1s. 9d.; 50 Tolcarne; 200 Rosa Grande, 2s.; 2 Miners, £202½; 3 East Basset; 60 Dale, 10s. 6d.; 15 Great Vor; 10 Basset and Grylls, £11; 120 Merilyn, 2s. 6d.; 50 Kelly Bray; 200 East Seton, 5s. 3d.; 20 Tren- con, £2½; 50 Port Phillip; 120 Santa Barbara, 9s.; 50 North Down; 15 East Caradon; 20 Treloeweth; 50 Quebrada (£20 10s. paid); £4; 50 Wheel Hope; 100 Gawton, 10s.; 80 Vale of Towry, 4s. 6d.; 100 Alamillos; 50 Siltney Metal, 30s.; 125 Cambrian Gold; 25 West Wheel Vor; 100 Redmoor, 5s.; 10 Cliljah and Westworth; 7 West Caradon; and 5 West Chiverton; 25 Great South Tolgas; 5 North Rosear; 50 Wh. Crebor.

## STOCK AND SHAREDEALER.—MR. PETER WATSON, ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, 79, OLD BROAD-STREET, LONDON, E.C.

Twenty years' experience.  
(Two in Cornwall and Eighteen in London.)  
Bankers: The Union Bank of London, and the Alliance Bank.

Every information can be obtained on personal application, or by letter, as to purchases and sales of Mine, Railway, Bank, and other Shares and Stocks, and the best investment for capital.  
From the close proximity of his offices to the Stock Exchange, as well as the Mining Exchange, Mr. Watson is enabled to act with promptitude on all orders entrusted to him, which at all times are carried out with punctuality.

INVESTMENT FOR CAPITAL.—For a good investment and a great rise in the present price of shares, Mr. PETER WATSON is prepared to recommend four mines, which are paying good dividends (every two months or quarterly), and eight progressive mines, requiring but a further small outlay, which, from the present position and future excellent prospects, he feels confidence in recommending at the present greatly depressed prices. The above selection of twelve mines present more than the usual chances of success during the next twelve months. This list will be sent on application to all those who desire it, with the respectful solicitation that investors do their business through PETER WATSON, 79, Old Broad-street, London, E.C.

## PETER WATSON'S WEEKLY MINING CIRCULAR AND SHARE LIST, published every Friday, price 6d. each copy, forwarded on applica- tion. This Circular contains weekly important information with respect to all the principal Dividend and Progressive Mines in Devon and Cornwall.

## WEEKLY MINING CIRCULAR, PUBLISHED BY PETER WATSON.—The "Weekly Circular" of yesterday (Friday, Dec. 23), No. 353, Vol. VII., contains important information on several leading Dividend and Progressive Mines. Annual subscription, £1 ls. Single copy, 6d. each.

## ANNUAL MINING REVIEW FOR 1864, OF CORNISH AND DEVON MINES.—MR. PETER WATSON'S "WEEKLY MINING CIRCULARS" of the next four or five weeks' numbers will contain his usual Annual Review of Cornish and Devon Dividend and Progressive Mines during the year 1864, with advice as to purchases and sales.

## EAST WHEEL VOR.—The Truro Correspondent of the MINING JOURNAL (in the Journal of Nov. 26) in remarking on the district, gives the following extract:—

"The most important virgin ground in the district is the large set (formerly two sets) now working as EAST WHEEL VOR, comprising nearly the whole of the eastern half of the basin, and occupying precisely the same position, with regard to the granite hill bounding that side, as Great Wheel Vor does to the Tregonning granite. It includes all the lodes of Old Wheel Vor, as well as those of Wheel Metal, and the result of the sound and vigorous working it is now receiving is to be looked for with great interest. This set has, no doubt, been scratched about and played with for a long time—treated, in fact, as Wheel Metal was until within the last four years—but it has never yet received such handling as could, except by an extraordinary accident, be expected to lead to any useful result. It now, however, seems to be provided not only with a good plant of material, but with an ample paid-up capital; and certainly its chances at the present moment are infinitely better than those of Wheel Metal four years ago. If the analogous geological conditions under which the same lodes occur on both sides of the basin forming the Wheel Vor district should lead, as may certainly be fairly expected, to anything like analogous results, then indeed East Vor, containing, as it does, the eastern continuation of the best known productive lodes of the district, has a future before it not easily to be matched. It is to such mines as these—virgin ground well situated—that, in the best interest of Cornwall, the capital and energy of legitimate mining enterprise should be directed. The public cannot go very far wrong in them, for, although, of course, they cannot all succeed, yet a sufficient number to give a splendid result, on the whole, have never yet failed to do so."

The shares this week have been in good demand at £2¼ to £3, and when these shares advance to £3 or £10 each, probably they will be eagerly sought after by the investing public. Read agent's report among the Mining Correspondence.  
79, Old Broad-street, London, E.C.

## JAMES HERRON has FOR SALE the following SHARES, at the prices quoted, and FREE OF COMMISSION:—

20 Bedford United.	50 Gt. Northern Copper, 1s.	10 St. Ives Wh Allen, 22s.
20 Redol-Aur, 9s.	(call paid).	25 St. Day United, 24s.
20 Bottle Hill, 1s. 9d.	5 Gt. Wh. Vor, £23½.	10 Siltney Metal.
5 Bryn Gwlog.	5 Granbler, £5½.	2 St. John del Rey, £34.
10 Bryntail, £2 9s. 6d.	1 Redol West Cliford.	20 St. Just Consols, 2s. 6d.
5 Buller.	5 Grylls Florence.	20 St. Just United, 25s.
5 Clifford Amal., £31½.	5 Great Laxey, £18½.	25 South Darren.
1 Cargill, £57½.	50 Gt. South Chiverton.	100 Silver Vein, 7s. 6d.
2 Cwm Erlyn, £52½.	20 Hallenbeagle, £2½.	20 South Lovell.
20 Carn Camborne, 27s.	15 Hington Down, £4 3 9	50 South Laxey, £5½.
20 Chiverton Moor, £2½.	30 Kelly Bray, 16s. 9d.	10 South Croft, £14.
2 Cook's Kitchen.	10 Kitty (St. Agnes), £5 2 6	3 Tincroft, £16 16s.
20 Central Miners.	40 Lady Bertha.	1 Trelawny, £19.
5 Cape Copper.	20 Long Rake, 4s. 9d.	5 Vigna and Clouan.
5 Crebr., £27½.	50 Nant-y-Vor, 3s.	1 West Cliford, 25s.
5 Chiverton, £6 2s. 6d.	20 North Basset, 23s.	10 Wheel Ludcott, 7s. 6d.
20 Crever Abraham.	10 North Tor, 26s.	20 Wheel Grylls.
10 Camborne Vein, £2 8 9	50 North Devon.	1 Wheel Edward, 7s. 3d.
10 Cliljah & Went., £3 8 9	2 Nangiles, £21 8s. 9d.	1 Wheel Seton, £201.
20 Drake Walls, 14s. 9d.	5 North Wh. Croft, £23½	5 West Caradon.
50 East Clouan, 2s. 6d.	40 North Downs.	1 West Seton, £208.
2 East Basset, £49.	50 North Miners, 2s. 9d.	30 Worvas Downs.
15 East Carn Brea.	20 New Martha, 25s.	20 Wheel Union, 14s.
15 East Russell, £4 17s. 9d.	160 N. So. Caradon, 1s. 9d.	20 Wheel Hope, 3s. 6d.
15 East Lovell, £13 15s. 9d.	1 North Rosear, £19½.	20 West Vor, 23s. 6d.
10 East Chiverton, 20s.	10 North Shepherds, £3 6 3	10 Wh. Grenville, £4 3s. 9d.
10 E. Rosewarne, £27 6	1 New Seton, £60.	5 Wheel Margaret, £27.
10 East Vor, £2½.	20 North Chiverton, £2½.	1 West Frances.
15 East Grenville, £4 7s. 6d.	50 Port Phillip, 33s.	25 Wheel Harriet, 13s.
50 East Laxey.	50 Prince of Wales, 2s. 5d.	50 Worthing, 16s.
5 East Caradon.	1 Providence, £36.	1 Wheel Basset, £27½.
60 Frontino and Bolivia.	10 Quebrada (£20 10s. paid).	20 Wheel Crebor, 38s. 5d.
20 Fortuna, £3 8s. 9d.	40 Redmoor, 5s.	1 Wheel Kew.
25 Great Caradon.	10 Rosewarne United.	20 Wheel Ury, £23.
20 Gt. So. Tolgas, 29s. 9d.	5 St. Ives, £17 10s.	50 Yudananniana.
50 Great Retallick, 2s.	20 South Condurrow, 31s. 9d.	

And is a BUYER of 5 Clifford; 50 Wheel Ury; 20 South Laxey; 5 Bryn Gwlog; and 5 Cwm Erlyn.—2, Adam's-court, Old Broad-street, December 23, 1864.

## JOSEPH J. REYNOLDS, JUN., 37, OLD BROAD STREET, LONDON, E.C.

Mr. REYNOLDS recommends for immediate purchase shares in Rosekarnoweth and East Ellen Mines, being confident that a rise in price equal to cent. per cent. will soon take place. Shares can now be obtained at about £1 per share in each mine.

## MR. EDWARD COOKE, MINING SHAREDEALER, 2, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.

(Member of the Mining Exchange.)  
Mr. EDWARD COOKE has removed to the above address, where all communications on matters relating to business will meet with his usual attention.  
Dec. 23, 1864.  
Bankers: Alliance Bank, Lothbury.

## MR. C. POWELL, MINE SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C.

(Member of the Mining Exchange.)  
Mr. POWELL begs to inform his friends and the public that he continues to TRANSACT BUSINESS, as BUYER or SELLER of SHARES in MINES, at close net prices, either for cash or the fortnightly settlement.  
The following shares are recommended for immediate purchase:—Billins, Bryn Gwlog, Clifford Amalgamated, Chiverton, Chiverton Moor, East Carn Brea, East Wheel Vor, East Wheel Lovell, Frontino and Bolivia, Great Laxey, Great Wheel Vor, Hallenbeagle, Nangiles, New Wheel Lovell, North Chiverton North Wheel Croft, Siltney Wheel Metal, Santa Barbara, South Darren, South Lovell, Tincroft, West Chiverton, West Wheel Vor, Wheel Basset, Wheel Kitty (St. Agnes), and Wheel Seton.  
Dec. 23, 1864.  
Bankers: City Bank, Finch-lane.

## MR. GEORGE BATTERS strongly recommends his friends to buy West Chiverton, Chiverton, Herodsfoot, South Caradon, Devon Great Consols, Great Wheel Vor, Westworth Consols, and Siltney Wheel Metal for investment. These shares will pay good interest for money at present quotations.

## MR. T. P. THOMAS, GENERAL SHAREBROKER, AND AUCTIONEER FOR THE SALE OF MINING, RAILWAY, AND OTHER SHARES, STOCKS, BONDS, DEBENTURES, And all descriptions of Public Securities.

No. 6, NEW BROAD STREET, LONDON, E.C.  
Shares bought and sold on the usual commission.  
Terms for sale of shares by auction furnished on application.

## MR. T. E. W. THOMAS, MINING AGENT AND GENERAL MINING SHAREDEALER, 37, OLD BROAD STREET, LONDON, E.C.

MR. FRANCIS G. LANE, No. 2, ROYAL EXCHANGE,  
LONDON, E.C., has the following SHARES FOR SALE, free of commission:—  
50 West Maria and Fortes-  
cue, £2 1s. 50 Lady Bertha, 17s. 25 Wheel Grenville, £4½.  
100 Pollard, 8d. 30 Frank Mills, £5 10s. 3d.  
10 Wh. Kitty (St. Agnes), 25 East Rosewarne, £2½. 25 East Russell, £4 10s. 9d.  
£5 6s. 3d. 25 Great Wh. Hury, £1½. 20 South Lovell, £2½.  
100 Prince of Wales, 2s. 3d. 50 West Wh. Vor, 2s. 6d. 25 Torbay Hematite Iron, £1½.  
50 N. Wh. Martha, 25s. 6d. 25 North Trekerby, £2½. 50 South Darren, 36s. 6d.  
50 Vale of Towry, 4s. 3d. 5 Bryn Gwlog, £17 18 9 50 South Birch & Vifler, £2½.  
20 North Miners, 2s. 9d. 50 Wheel Crebor, 38s. 9d. 10 Great Laxey, £18½.  
20 Marke Valley, £6. 50 Grylls Wheel Florence, 25s. 5 Great Wh. Vor, £23½.  
20 East Caradon, £16½. 25s.  
25 Hington Down, £4 13 9 10 New Rosewarne, £8.  
BUYER of Marke Valley and Torbay Hematite Iron.  
Parties of respectability can have transfers registered in their names previous to payment.  
Bankers: London and County Bank.

## MESSRS. WARD AND JACKMAN, 2, ADAM'S COURT, OLD BROAD STREET, AND MINING EXCHANGE, LONDON, E.C. Bankers: London and Westminster, Lothbury.

## HARRIS AND CO., STOCK AND SHAREBROKERS, AND FINANCIAL AGENTS, 15, GEORGE STREET, MANSION HOUSE, LONDON, E.C.

## MR. E. GOMPERTS, MINING OFFICES, 3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C. BUSINESS TRANSACTED IN BRITISH AND FOREIGN STOCKS AND SHARES. Terms, 1¼ per cent. Bankers: London and Westminster Bank.

## MR. J. W. GILBERT, MINE SHAREDEALER, 1, PINNER'S COURT, OLD BROAD STREET, LONDON.

FOR SALE, EACH NETT (OR PART):—  
30 Long Rake, 27s. 6d. 200 West Kitty, 7s. 6d. \*100 Bryntail, 50s.  
19 East Rosewarne, 50s. 100 Illogan Consols, 4s. \*100 New Treleigh, 6s. 3d.  
50 West Cliford (Limited), 10 Vale of Towry, 3s. 6d. \*95 Arthur, 5s.  
25s.  
\* Calls recently made and paid.  
Apply to JOHN W. HUTCHINSON, 78, Old Broad-street, London (Member of the Mining Exchange).

## MR. THOMAS CARTHEW, MINING OFFICES, 17A, SISE LANE, BUCKLESBURY, LONDON, E.C. Reliable information respecting mining generally can be obtained by applying as above. Bankers: Roberts, Lubbock, and Co., 15, Lombard-street, London.

## THOMAS HAMILTON (late of Truro), STOCK AND SHAREDEALER, No. 1, CROWN COURT, THREADNEEDLE STREET, LONDON (Member of the Mining Exchange). Bankers: The Alliance Bank.

## WILLIAM BARTLETT, MINING SHAREDEALER, No. 2, BUCKLESBURY, LONDON, E.C. (Member of the Mining Exchange.)

The prices of first-class mining property being at this season extremely low, affords a good opportunity for making advantageous investments. Mr. WILLIAM BARTLETT is in a position to advise as to what stock should be bought, sold, and avoided.  
Telegrams promptly attended to.—Bankers: Alliance Bank, Lothbury.

## CLERK.—The ADVERTISER, having SERVED for SOME TIME in ONE of the LARGEST MINING OFFICES in LONDON, is DESI- ROUS of a SIMILAR SITUATION. Town or country. Understands cost-book and information and sound advice to capitalists.

## AN UNDERGROUND AGENT WANTED for a LEAD MINE in the NORTH OF ENGLAND. The applicant must have had good practical experience, and should be under 40 years of age.—Address note, with testimonials en- closed, to Mr. J. R. EDDY, Carleton Grange, Skipton, Yorkshire.

## HENRY GOULD SHARP, STOCK AND SHAREDEALER, 32, POULTRY, LONDON, E.C., Member of the Mining Exchange (Established 12 years).

Is in a position to give SOUND ADVICE and RELIABLE INFORMATION as to the SAFEST and BEST PAYING INVESTMENTS of the day, both in RAILWAY BANKING, MINING, INSURANCE, DOCK, GAS, WATER, FINANCIAL, and OTHER MISCELLANEOUS SHARES.  
Bankers: London and Westminster Bank, Lothbury, London, E.C.

## HENRY GOULD SHARP'S RAILWAY, BANKING, MINING, AND INVESTMENT CIRCULAR (post free) should be consulted by the public before investing. Dividends can be secured from 10 to 20 per cent. upon the money invested. It is a safe guide, containing reliable information and sound advice to capitalists.

## MR. G. D. SANDY, SHAREDEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C. A selected list of bona fide shares for investment forwarded gratis. Current Daily Price List may be obtained as usual.

## MATTHEW GREENE, STOCK AND SHAREDEALER, 9, GRACECHURCH STREET, LONDON. Mr. GREENE has returned from Cornwall, and will be happy to afford his friends the benefit of all the information he has gleaned concerning the mines of the Gwennap and Redruth districts.

New Cliford.—I have visited this promising mine in the company of some of the best mining authorities in Cornwall, and I am pleased to inform the shareholders that there exists only one opinion, and that is that New Cliford possesses all the elements necessary for ensuring success.  
Investments in the following mines would be certain to pay well at present prices—viz., New Cliford, £1¼; East Laxey, 2½; East Snaefell, £2½; North Trekerby, £2½; and Great Laxey, £18.  
Commission 1¼ per cent.  
Imperial Bank and London and County.

## MR. J. P. ENDEAN, STOCK AND SHAREBROKER, 1, CROWN COURT, OLD BROAD STREET, LONDON, E.C. Having had 25 years' experience in the mining districts of Devon and Cornwall, and three in the London market, with daily information of important changes from qualified agents, also the most authentic reports relating to other investments, he is in a position to afford the earliest information to his clients, and to direct capitalists whether to buy or sell in mines, railways, or other securities.

A carefully selected list of sound progressive and dividend shares (certain to give a large percentage immediately) forwarded on receipt of 5s. in stamps.  
Orders and telegrams receive immediate attention.

## MR. D. STICKLAND, M.E., having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon. MINES INSPECTED and FAITHFULLY REPORTED ON. DEALER in MINING, RAILWAY, and OTHER SHARES. His monthly Circular forwarded on receipt of six postage stamps. All communications between this and Christmas to be addressed Padstow, Cornwall. Wellington Chambers, 74, Cannon-street West, London, E.C.

## THOMAS MOLYNEUX AND CO. (Late LEIGH, MOLYNEUX, and Co.), MINE AGENTS, SHAREBROKERS, and GENERAL COMMISSION AGENTS. SHARES of EVERY DESCRIPTION BOUGHT and SOLD on commission, or otherwise. \* Especial attention is given as to buying and selling mining shares. The latest information can be given as to present price and prospects, which they are enabled to give by daily communication with their agents in London, Devon, Cornwall, Ireland, and Wales. Mines inspected and reported upon by experienced agents, and reliable information given as to mining property.—Address, THOMAS MOLYNEUX and Co., No. 28, Princess-street, Manchester.



## Original Correspondence.

## PETROLEUM AS STEAM-FUEL.

SIR,—Will you permit me to reply to the observations in your valuable Journal relative to the experiments making at Woolwich with petroleum as steam-fuel. They are, as you suppose, undertaken at my own expense. The writer in the *Times* caught sight of what I was about, and sent to the paper his own account. If I had supplied it, it should have contained fuller particulars. The boiler at Woolwich, the second my grate has been under, belonged to a very powerful steam hoisting-engine; it was of 14-horse power, capable of being worked up to 24. The coal grate was of 9 feet superficial content; my small cast-iron grate was only 2 ft. This placed in position, with the expenditure of 5 gallons of petroleum, costing 7s. 11d., in 24 hours caused the steam to blow off fully, with the valve fixed at 10 lbs. pressure. The water at starting was quite cold. My grate of thin cast-iron, in four separate pieces, was not sufficiently strong to bear the pressure, which, with that of the atmosphere, was 25 lbs., and as it indicated weakness, I drew off the oil (about 1 gallon, 5 gallons having been put in). When I next apply a grate of different construction, and stronger build, I have no hesitation in saying I will keep that engine going at full speed for days together, with a consumption of 64 gallons of petroleum per day. It will be a 6-ft. super. grate: 42 gallons of oil I consider quite equal to steam-producing power to 1 ton of coals; but this, as you say, requires to be proved, and proved it shall be.

It is idle, I consider, to enter into any discussion as to how much coal can be utilised; nearly every page of the late brochure of Mr. C. Wye Williams, no second-rate authority in this matter, goes to prove how very small a portion of a ton can be used effectively in our steam-furnaces. Engineers admit that half is lost in smoke; they would be much nearer correct in stating it at two-thirds. My answer to all analytical chemists is this—the place to study the value of coal as fuel is not in their laboratories, but either down among the stokers or under the thick black cloud of valuable hydrocarbons and gas proceeding at violent speed out of the capacious smoke-pipe, and trailing for a few miles beyond it. I can only add that my petroleum grate is superior in action to a coal grate in every particular. There is no destruction of the bars, and no ash of any kind; it only requires quiet and easy scientific management, and will admit of no hard usage whatever. I regret it should interfere with coal, but the full development of steam navigation is of more importance to the world than the keeping up the consumption of coal for private interests.

34, Kensington-square.

C. J. RICHARDSON,  
Architect and Civil Engineer.

## NOTES OF A COLLIER'S VISIT TO A CORNISH COPPER MINE—No. II.

SIR,—The pumps are all forcing sets, with solid plungers or rams, except the lowest, which is a lifting set, with a bucket. The main pump-rod, about 18 inches square, goes down vertical 50 fathoms; at this point there is an L-bob, or radius beam, for working it on the slope, when the pit follows the lode. This rod goes down to the bottom of the pit, and the plungers, or rams, are glided on to the side to the main rod every 30 or 40 fathoms. All the joints are double plated, the bolts on one side acting as dumb bolts. At every joint there is a collar for the purpose of keeping them steady. At these collars the rods are clad with bench or elm sliding deals on all the four sides, and these deals are fastened at top and bottom, with glands placed round the rod, and embracing all the four deals. The buntous, or collars, are faced with iron where they come in contact with the sliding deal, and are arranged so as to be adjusted as the deals wear. The under side of the rod on the slope runs on a pulley, 2 ft. diameter, but the others are the same as the vertical ones. There are also keep chocks placed at every 30 or 40 fms., upon which the rods would drop in case of breakage. A small crane is placed at every set on the slope for lifting anything.

The principle of Cornish pumping is, that the rods shall be slightly heavier than the column of water, so that in their three-valved engines the engine lifts the rods, and the weight of the rods descending forces up the water. The rods, however (for steadiness, I suppose), are really much heavier than the column of water, and hence at the surface, and at every 30 or 40 fathoms in places cut out of the side of the pit, there are large beams, or "bobs," with boxes at one end filled with stones, metal, &c., attached to the rods as a counter-balance. Of course, the counter-weight could be all placed on one beam at the surface; but by having "bobs" at different points the strain on the rods is more equalised. A rough sketch of the arrangement is here given. The suction pieces of the forcing sets are very short, the H-piece being within a few inches of the water in each cistern, and every precaution is taken to prevent contraction of the water passage through clacks and pipes. In these arrangements seem to lie much of the secret of the steady working of the Cornish pumping-engine.

Every precaution is taken to prevent contraction of the water passage through clacks and pumps. In the working of the engine the "indoor" stroke is regulated by a "cataraet," acting on the exhaust and steam-handles in the usual way. The descending or outdoor stroke commences whenever the indoor stroke is completed, and the quadrant relieves the equilibrium valve. Suppose, then, the engine to be "out of the house"—that is, the piston at the top of the cylinder—the cataraet descends and frees the exhaust valve, which is opened full, and the steam rushes from the under side of the piston into the condenser, and, at the same instant, cold water is thrown into it by the injection valve. After a slight halt the cataraet also frees the steam-handle, which opens full, sets the piston rapidly in motion. The steam is cut off at one-third of the stroke, and the impetus and expansion carry it on to the end of the stroke.

The equilibrium valve is instantly thrown open, and the engine returns slowly, the rods being slightly in excess of the weight of the water. In this way the engine lifts the rods, and the rods force the water up. In fact, the speed of the engine depends very much upon the balance bobs; if they very nearly balance the water the speed will necessarily be slow; if more speed is wanted some of the balance weight is taken off, and the rods descend more rapidly, but it will be readily seen that every pound of balance thus thrown off to gain speed is waste of power, and increases the expenditure for fuel. Hence Cornish engines are kept constantly working, and the less speed the greater economy.

Ladders extend from top to bottom of this shaft; the sumpmen descend to their work by them, and in so doing examine the rods, &c., as they go along, and any defect is brought under observation. The ore from the mine is drawn up the same shaft that the pumps are in, but separated from them by a wooden brattice. It is wheeled along the mine in barrows, and emptied into iron kibbles 3 or 4 ft. long, and about 18 in. wide at the centre, but smaller at the ends, hung by two small chains, in the usual way, and drawn up the pit by a chain attached to a drum worked by the steam-whim. There are two kibbles in the pit at the same time, the one descending while the other is ascending, and they descend the sloping as well as the vertical part of the pit, sliding down the rock, or on wood creaking laid on the bottom for that purpose. The kibbles in this instance meet on the slope. At "meetings" a piece of wood, 6 in. square and 30 or 40 ft. in length, is laid on the floor of the slope, to keep the kibbles separate, and at each end a piece of the same size stretches diagonally to the side of the pit—the piece at the upper end, to the right, to make the empty kibble slide into the left-hand side; the piece at the lower end, to the left, to make the full kibble pass to the right. The upper part is clad with deals for the full kibble to slide over, and the lower one for the empty kibble to slide over. The speed did not appear to exceed 80 ft. per minute. No men were allowed to ascend or descend by this machinery. When the miners want to load the kibble at any of the levels they place a piece of wood, 12 or 15 feet long, diagonally across the shaft, and the kibble slides into the level, and signal to the engineman when to take it away again. A signal wire with a lever at each landing stretches from top to bottom of the pit: when not used the levers at the various levels are detached, so as not to have extra weight and friction. I noticed, in addition to the ordinary rafter plate, most of the pits had a rafter plate about a foot above the hammer, so that when it was raised the upper plate was struck, and as it was hung loose upon bolts it made the most noise. I was much pleased with the pitwork—the absence of leaky joints, the good state of the collars, and the small quantity of water falling: this may be judged of when I state that my clothes were scarcely wet through, although I ascended 100 fathoms on ladders.

Having reached the surface, adjourned to the changing-house, and got a good wash and my dry clothes on, we next went to the drawing-office,

where I was kindly shown drawings of the pitwork and workings. They were very distinct and clearly kept. A ground plan and section of each vein is kept; the ground plan shows the lines of the levels, which, owing to the incline of the lode, are not exactly above one another; and the vertical section shows the working, like to the plan of a coal mine.

I had now seen most of the arrangements, and drove home much satisfied with my journey.

In next week's Journal will be given the Remarks which occurred to the writer as likely to prove useful to both colliery and metalliferous managers on the points under notice.

## QUARTZ MINING MACHINERY IN AUSTRALIA.

SIR,—A letter on this subject appeared in last week's Journal, from a correspondent, who dates from Ballarat, by which it appears that Professor Smyth's remarks on the Cornish Stamps, published in the Journal of July 2, have not met with your correspondent's approval, especially that part in which the Professor consigns the alleged valuable improved Australian revolving stamps "to the limbo of obscurity," and most rightly so too. Many years ago I visited a tin mine in Cornwall, and went over the floors, to inspect the dressing department, and was then shown a stamps precisely similar to the one described by "D. B. P."—round heads and lifters, which made part of a revolution at every lift; and on asking the agent, who was present, the advantages of such a stamp over those ordinarily in general use, he stated that the faces of the heads were worn more evenly, &c., but owing to the prejudice of the Cornish miners and engineers, or their inability to discover any real improvement, the stamps did not come into general use, and this one, after a while, happened here to go the way ours are said to be disposed of in Australia—by being sold for old iron.

When gold mining in Wales began first to create a stir, the parties concerned laughed at the ignorant Cornishmen, and ridiculed the idea of copying any machinery they used for the reduction of their quartz, and employed other, and what they contended, much better, apparatus, which apparatus, in one day, would not crush as much quartz in hundredweights as a good Cornish stamps would crush tons; and I am led to think the experience of the Australian gold mining companies is very similar to the Welsh companies. "D. B. P." speaks of Cornish stamps as being clumsily fitted, and constantly needing repairs, &c., and then goes on to speak of the superior Australian one, as containing fewer parts, better fitted, &c.; and then to excite our astonishment, states that he has reduced the item of wear and tear alone from 1s. 9d. to 8d. per ton on a mill reducing 1000 tons of quartz per week. Now, had "D. B. P." been aware of the actual cost of stamping in Cornwall, he would have left out these figures. I beg to inform him that I know a mine not far from Redruth, using 96 heads of stamps, where they crushed 31,489 tons of tinstuff in one year, at a cost of 11½d. per ton. This cost included the maintenance of engine, engine-men, wear and tear of machinery, and stamps watches. Attached to the engine was a small crusher, which crushed all the samples of the mine (equal to at least one-twelfth of the power of the engine), and the boilers supplied steam to a small engine, which drew all the stuff stamped up an incline, the perpendicular height of which is more than 60 feet. I do not think I should be in error in stating the actual cost of stamping only at 9d. per ton. Now, we must bear in mind that such a stamps would crush in the same time at least 70,000 tons of their friable quartz; and, therefore, supposing everything to cost 250 per cent. more than in England, the cost then would not exceed the 9d. per ton. And yet, with his 10 years' experience, and valuable improvements, your correspondent admits his wear and tear alone to be 8d. per ton, without taking into account fuel for engine, repairs of same, engine-men, stamps watches, &c., which I find costs one of the large companies, stamping more than 4000 tons per month, six times more than we can reduce large quantities of tinstuff for here.

In Cornwall, when we erect large stamps, with a great number of heads, we put the engine in the centre, with an equal number of stamps-barrels on each side, which go round for round with the engine; and the size of the cam-barrel is governed by the number of revolutions it has to make, so as to allow each stamp-head to strike from 50 to 60 blows per minute, with an average fall of 10 inches; this we find preferable to the newer system introduced in Australia, of 70 blows per minute, and about 6 inches fall. The loss of leverage, if any, of the large cam-barrel is much more than made up by the direct action of the power employed, and the avoidance of tooth-gearing to drive the barrels, because, if the barrels should be smaller, we must use tooth-wheels to regulate the speed of the barrels to give each head the right number of lifts.

It is often urged against Cornishmen that they are slow to copy new ideas, but I think this rather a libel on us; and if your Ballarat correspondent will kindly send you a sketch and description of their machinery, and you will insert it in your useful Journal, that should any part of it be new, and worth imitating, he would soon see it adopted in this county.

Cornwall, Dec. 20.

## MR. NICHOLAS ENNOR'S GEOLOGY.

SIR,—Mr. Nicholas Ennor offers to discuss the questions raised in his letters on Geology, which week after week have appeared in the Journal for some time past. I am glad of this, for there is no better way of getting at the truth than by free and fearless discussion. I regret, however, that as a practical miner, of very nearly as many years standing as Mr. Ennor himself, that I must join issue with him on almost every point, and I am sure he will not think the worse of me for telling him so at once; and, before going further, I may observe that in what I have to say I will carefully abstain from personalities, and I must request that Mr. Ennor will do so too. We have to investigate the operations of Nature in building up this marvellous world on which we live, and influenced, as we are, by an intense desire to know how the things which are seen were made, there is no room for prejudice or petty jealousy, for hard words or ill-tempered remarks. I readily hold out to my venerable opponent the right hand of fellowship, and pledge my honour that unless he violates the ordinary courtesies of newspaper controversy, not a word shall escape me that will give him offence.

Mr. Ennor has opened up a wide field for investigation, but I think all he has said may be arranged into four divisions. At any rate, in that form they can be most advantageously discussed:—1. The formation of granite, porphyry, and other rocks of a similar character. 2. The formation of coal. 3. The formation of mineral lodes. 4. The formation of stratified rocks. But the great difficulty with which Mr. Ennor labours is the internal temperature of the earth, which he refuses to accept. Indeed, his letters are for the most part directed against the theory of an internal fire, which he supposes geology teaches. I fear he has misunderstood the views taken by geologists on this subject, for no one can believe that he would intentionally misrepresent them. It may, therefore, be as well that I should dispose of this point first, before entering on the four propositions into which I have divided the controversy. Let us, then, ascertain what geology really says on the subject. Strictly speaking, geology teaches the "nature and position of the different masses of earthy or mineral matter of which different districts are composed;" and in its widest sense it also teaches "the history of their production." Geology, therefore, deals with the material world as it now exists. It does not venture further than the lowest stratified rock. There is no record concerning the strata above the leaves in the great Book of Nature about which Mr. Ennor talks, written all over in fossil letters, more readily made out than the uniform inscriptions upon the crumbling monuments of buried cities in the East. But men will speculate; they are not satisfied to begin with the bottom rocks of Cambrian series, which are the first pages in this wonderful book; they would enquire into the origin of the book itself, a subject as perplexing and inscrutable as the origin of evil. Thus we find men busy in imagining the condition of the world before the lower rocks were deposited, and, like Laplace and Sir William Herschel, describing how the world was thrown off from some nebula in space, and assumed its present shape. But all this has no more to do with geology than the origin of the mind with metaphysics, or the origin of matter with natural philosophy. We can trace matter up to its primary elements, but no further. We can read the history of the world up to the Cambrian period, when the humble zoophyte, clinging to its stony bed, was the highest form of life in the dreary solitude of the new world. Here the record falls us. Beyond is thick darkness, which the light of science has not yet pierced. It should, then, be distinctly understood that geology is not measured by the fanciful theories of those who are impatient to anticipate the results of laboured investigation. Geology is silent as to the origin of the world.

There are, however, certain phenomena continually met with in scientific enquiries, which enforce the conclusion that the interior of the earth has so high a temperature as to keep in a state of fusion every mineral known to the chemist. It will not do to "Pooh! pooh!" this conclusion. Argument must be met by argument, for there is no force in a sneer. Nor will it do to start objections which cannot be satisfactorily replied to. For instance, I assert there is such a thing as heat, which we know only by its properties, but my faith in it is not shaken, because I cannot explain to a captious enquirer the nature of heat, which is not yet understood. Again, I assert that there is such a thing as the human mind, which we know only from its properties, but my faith in it is not shaken because I cannot explain its nature, which is not yet understood. And when I reason from recognised physical laws, proving from observed phenomena the internal heat of the world, my faith in it is not shaken because I may not succeed in answering the objections which Mr. Ennor or anybody else suggests.

"There is a great difference," says Mill, in his "Logic," "between inventing laws of Nature to account for classes of phenomena, and merely endeavouring, in conformity with known laws, to conjecture what combinations might have given birth to individual facts." Keeping this principle in view, I will at once proceed to consider the phenomena upon which the belief in the internal heat of the earth rests; and I begin with the density of the earth. According to the careful experiments of Reich, 5.63 appears to be the density of the world, taking water as one, while the solid portions of the outer part are from 2.4 to 2.9. Fine granular basalt has a density of from 2.95 to 3.07, and granite of from 2.6 to 2.9, and ordinary rocks of from 2.5 to 3.0. Taking these rocks, then, under the pressure of gravity to be more than twice as dense long before they get to the centre of the earth as they are at the surface, the world would have a much greater density than 5.63,

its absolute density. So far we deal with facts which Mr. Ennor cannot dispute; and to account for this difference between the real and the theoretical density of the earth, we assume the presence of some expansive force in the interior, counteracting to that presently stated as to the increasing temperature of the earth in depth from the surface, that that force is heat. If necessary I will, in the course of this discussion, give the data upon which the argument is based.

My next argument is derived from the existence of active volcanoes in various parts of the world, proving, beyond doubt, that from some cause or another portions of the interior of the earth are so intensely heated as to render the materials of solid rock perfectly fluid. I will not enlarge on this argument at present; for it is enough for my purpose to show that fused rock exists in the interior of the earth, and that it is frequently ejected in large quantities.

My third argument, and that upon which I lay greatest stress, is the fact that the temperature of the earth increases in depth at about the rate of 1° Fahr. in from 50 to 60 ft. after the first hundred, in every part of the world, and in all climates alike. This fact is all but universally admitted; however, as Mr. Ennor may be incredulous, you must permit me to go a little into detail. Nothing can be more satisfactory than the evidence in support of this fact, for it is the result of direct observation with instruments of great delicacy and tried accuracy. Walferdin found the temperature in the boring of an Artesian well at Grenelle increases at the rate of 1° Fahr. in about every 59 ft. The water in this well ascends from the green sandstone in the hills near Louisa. The well is 1794 ft. below the base of the Grenelle basin, or 1675 ft. below the level of the sea. The temperature of the spring is 81.95° Fahr. The boring at the new salt works, Reims, gives an increase in temperature of 1° Fahr. in 54 ft. This boring is 213 ft. above the level of the sea, and reaches an absolute depth of 2281 feet. Prof. Phillips's boring 734 ft. gave an increase of 1° Fahr. in 55 ft.; at Mendorf 1° Fahr. in 75 ft. Prof. Phillips's observations in the Monkwearmouth Colliery give 1° in 60 ft.; and Mr. Atley's observations, in sinking the Dukensfield Colliery, give an increase of 1° Fahr. in 32.2 feet. Other collieries give different results, varying from 60° to 83°, respecting which Mr. Hall says—

"The coal formation may be expected to show great irregularities than many other formations of a more uniform composition and density, consisting, as it does, of a great variety of strata alternating with each other, differing in porosity, conducting power, mineral character, and in the greater or less facilities for the percolation of water, we cannot expect a formation of this kind to exhibit everywhere a uniform increase of temperature in descending through it." I could occupy many pages of the Journal with facts like these, but for the present I must pause. I do so convinced that I have clearly shown there is a gradual increase of temperature in depth, which Humboldt has proved by many experiments, and is wholly independent of atmospheric action. The conclusion of all this is, in the language of a valuable scientific handbook, "that if we could suppose that the rate of the increase observed in mines and deep wells—that is to say, an increase of 1° Fahr. for every 60 ft. of descent, or thereabouts—were to be continued indefinitely into the interior, it would follow that at a depth of 10,000 ft. beneath the British Islands all water would be as hot as boiling water is at the surface, or 212° Fahr. At a depth of 20 miles the temperature of all parts of the globe would be 1760° Fahr., and at 50 miles would be 4600° Fahr. Now, the heat of a common fire is calculated at 1040° Fahr.; brass melts at 1860° Fahr., gold at 2016° Fahr., and platinum at 3080° Fahr."

I have now given you a very brief outline of the evidence which has led to the conclusion of an internal heat, which it must be admitted is not so absurd a proposition as it is sometimes made to appear. But, in conclusion, I repeat that this subject has no necessary connection with geology, properly speaking, but I thought it would be as well for me to meet this difficulty in the outset of the controversy. Let us, then, finish with this point before entering on the main divisions of the subject. Let me now I appeal to Mr. Ennor, and to any other of your correspondents who may enter the lists against me, to treat the subject frankly and in a business-like way, wholly free from personal animosity.

Blakenorth, Dec. 20.

JOHN JONES.

## THE DEVON GREAT CONSOLS MINE.

SIR,—In my report of Devon Great Consols, given ten years since, I made some remarks on the hot water in Clifford lode, and said that ore was there forming, while at Devon Consols it was dissolving. Will you kindly publish my report, as it bears out my late letters.

N. ENNOR.

TO THE COMMITTEE OF MANAGEMENT OF THE DEVON GREAT CONSOLIDATED MINES.  
Jan. 1855.—Being aware that it is your stipulated rule for all inspectors who go through these extraordinary mines to transmit you a copy of their report, I very much regret my time was so limited as not to allow me to make such minute examinations as some day (by your permission) to take a second round, and thoroughly examine all the mines. In accordance with your rule, I tender you the following remarks:—First, noticing that the immense deposits of copper are found in, I think, a continuous line, commencing on the banks of the River Tamar, about 3½ miles west of Tavistock, in a buff-coloured kila or slate rock that overlaps the granite, which is about half a mile to the south-west. The lode runs a few degrees south of east, dipping south. The slate rock, when clear of the lode, runs obliquely to it, with an easterly dip, which in nearly every case produces good results. The first discovery was made at Wheal Maria, about 1½ miles from the Tamar, and within a few hundred feet of the river; and, what is most singular, this discovery was made as yet no mine had been made at the extreme point of the ore in its western direction. On turning east, the lode continued on, and, at this point, where it was again found productive on the east side, and continued so, with only casual poor places, through Wheal Fanny, Wheal Anna Maria, and Wheal Josiah, a distance, I think, exceeding a mile. Wheal Emma is still further east, and showing good copper, but not yet making profitable returns. In all these mines the water is what may be termed easy, and drawn out principally by powerful water-wheels worked by the surface level. At Wheal Maria, the lode continued rich down to about 75 fms. level; the shaft is still sinking. At Wheal Fanny, the lode continued productive to about the same depth, or a little below; shaft down to the 120. At Wheal Anna Maria, the ore was good to about the 90; shaft sunk to the 110. Wheal Josiah produced good ore to about 80 or 90 fms.; sunk to the depth of 130. At this mine there is a second bunch or deposit of ore further east, but it is not opened to the extent of the western bunch, nor likely to continue as deep. The heart of all these deposits is found near cross lodes, slides, or droppers, which have brought the magnetic current to act on these points. These mines show about 15 slides, or cross lodes, and many droppers; when I say droppers, I mean a portion of the lode that diverges from it, and returns to it again at various distances, leaving what is commonly called horse or kila between; at these junctions or meetings large deposits of copper are found. Droppers produce good effects on most lodes, and particularly on this one, and I unhesitatingly say this lode is indebted for its great mineral wealth to the cross stratification, accompanied with cross lodes, slides, and droppers, all meeting in a favourable direction; it collected the copper, sulphur, and iron that were passing through the earth in solution, which caused them to meet at these points, where the magnetic current was brought to bear with more than a usual effect, aiding chemical action, which caused a combination of sulphur, iron, and copper to unite and fix about these points, where it had been gathering since the time when in a congenial element makes rapid strides; everything required to aid it appears to rush from all directions to this centre of attraction, until its resources are consumed, when it again gradually subsides, and heat is no longer perceptible. To my view, this is in the formation of ore in the earth; at times a chemical action takes place, and ore forms. I believe portions, such as iron, silica, and earth are then carried to near the surface, forming gossans on the backs of lodes, often carrying off lead, silver, gold, &c., with it, just as we see portions of ponderous substances carried off when vitallised by heat. This process is now in action at the United Mines, Gwennap, where the sulphuret of copper is there forming. Hundreds of children that now live will see these mines, when worked below the deposits of ore, become comparatively cold; its source may be found continuing eastwards, where I believe the deepest copper mine in England will be found. In my foregoing remarks I have noticed to what depth each of your mines have been productive, after which I may naturally suppose you will expect me to give my opinion as to what I may think will be the result of these mines in depth. This I shall attempt to do, first remarking that arseniates of copper are rare productions, and only found in stratifications where copper is found, and where the arsenic, the arsenic of sulphur, and then it is found only to a limited extent. The great bulk of all the ore in Cornwall and Devon is sulphuret. In all the rocks in the two counties that contain metallic substances in solution, or atoms, we find it has readily combined with sulphur and iron. It is only in rocks that contain both small portions of other minerals that large quantities of sulphur are found, and then only combined with iron. To form good copper lodes the stratifications or adjoining rocks must hold in solution, at the time of their formation, a large percentage of sulphur, iron, and copper; if in small portions it only forms sparsely, but then it is a sulphuret of copper the same, if about an equal part of each, or iron rather predominates, it appears to have the desired effect, and good sulphuret of copper is found. In Nature's formations in the earth there are secrets yet unknown, as everything appears to concentrate about the seat of action. From the large quantities of copper already found in this mine, and seeing it overcharged with iron, leaves us reasonable ground to suppose that it must shortly become contaminated in depth, when arsenical mud, containing a less portion of copper, will next be found—in fact, I believe it is found in the first worked mines; this I pointed out to one of the agents of the mine two years since. Every deposit of copper in this mine will shorten in depth, and end in an egg-shape or oval terminus. Wheal Josiah and Anna Maria will hold the deepest, as they were the first deposits, or great seats of action. The ore at Wheal Maria, and the eastern bunch at Wheal Josiah, are far more recent formations than the others, and not unlikely to have been formed from the copper once in the bunches now decaying and passing off in solution, and re-forming. The character of the ore and the features of the lode show it. The grand question concerning these mines is, will deposits of copper be found under this arsenical mud? Here I might say that this lode has more than a fair chance, as I am aware that there is a lode south which is said to dip north; if so, it will ultimately meet the main lode, but at what point I am unacquainted; neither do I know how many spurs are known to be going off from the main lode that will most likely meet it at deeper levels. The captains no doubt know; if not they will find out by cross-cutting. All these junctions will have a strong tendency to collect ore, and particularly so about the junction of the one dipping north. I have no doubt but a quantity of ore of low produce will be found at these points, but the question is, if a great bulk were once formed there, and is now going off in solution, or gone? It is clear ore formations have their day. The formation of copper in this lode has passed, the heat has subsided, which is clearly shown in every vein through the mine. I never saw ore going faster into solution than in the main bunches of this lode. Sulphur, iron, and copper are coming out of every portion and going off in solution; as a proof, wherever the water comes in contact with metallic iron copper precipitates. In all probability the ore in these mines are losing ¼ per cent. annually. I am aware it is now laid open and bled, but there is sufficient evidence of its decomposing, as the best bunches become coated with red oxide in 24 hours. The United Mines show no signs of decomposition, but are rapidly forming thousands of rhombus crystals in the hot portions on the external faces. The east bunch of ore in Wheal Josiah is also fast forming quartz crystals. I have before stated that all ore has its day of formation, and I think arsenical ore is now rapidly forming and superseding copper and sulphur in this lode. A high temperature for arsenical formation is not required, the adjoining rocks having become drained of copper. May it not have made way for arsenic as a successive crop? Just as we see one crop follow another on the earth's surface; and may not arsenical ore prepare the way for consecutive crops? If we look at the earth's productions, we see it is a prevailing law for one thing to live by the destruction of another. Then, I ask, is this arsenical formation destroying the copper, &c.? I might further remark, it often happens that the same lode contains different deposits of copper at various depths, which appear to have been formed about the same time, and alike attacked by the same common enemy; but the deepest deposits are generally the first to give way, yet there may be thousands of tons of low-price copper still remaining in depth. The deep ore deposits are in nearly every case found under slides, or at the bottom of droppers, or under a regular change of strata, which may be termed a second back. Cross lodes that underlie but trifling aid in the formation of the more shoal deposits. The immense quantities of copper already found in this lode are sufficient to cause everyone to agree that these deep interpositions should be seen, as the mine is still what may be termed a shoal one, and I judge from analogy we might find still larger deposits remaining; still there is room for doubt when we see the strong prevailing character of the arsenical mud, and traces of copper passing off in



mining. The droppers and the south lode may retain copper at the junctions far below the deep levels of this mine. In conclusion, I beg to say that I give the captain great credit for his laying out the mine, both underground and at surface. It is the best conducted concern I have seen throughout the two counties. I would further notice that I thought the reserves from my hasty view enormous—sufficient to keep up your dividends through the greater portion of your life, irrespective of new discoveries.

N. EMMON.

## BORING MACHINE AND VENTILATOR COMBINED.

Sir,—No doubt it will be pleasing to your readers in general (and more especially those who are most intimately connected with mining) to know that an invention, bearing the above title, is about to be protected by patent. A short time since the writer had the pleasure of thoroughly inspecting and seeing at work a model of the invention, which he found to be entirely different from any other invention for boring and ventilation yet brought before the public. The simplicity of its construction, and the easy manner in which it can be managed, with the small amount of power required to perform its work, make it at once apparent that it will eclipse all other inventions for boring and ventilation yet brought before the mining world.

The great advantages of this invention are that it can be put to work in any part of a mine, no matter at what depth from surface, or distance from a shaft; it will bore holes at any angle, ventilate the workings for hours at a time; it can be moved out of the way of blasting, and put to work again in a few minutes. The machine can be constructed for 30 per cent., and do the same amount of work at full 70 per cent., less cost than any other boring machine yet invented.

The inventor does not feel himself justified in giving any particulars at present, but in a short time it will be secured to him by patent, when it will be brought before the public through the Journal. The writer has no connection with or interest in the invention, but does not hesitate to affirm that it will make a great revolution in mining, and be found a great boon both to adventurers and hard-working miners. A. B. C.

## GOLD MINING IN WALES.

Allow me, through the medium of your valuable Journal, to make a few remarks upon this branch of industry, which may be advantageous to the many capitalists interested therein. The discovery of the rich deposit of gold-bearing quartz at Clogau led to the formation of various companies, with enormous capitals, the greater number of them being brought out as relatives of the original Clogau, though, unfortunately, they have hitherto proved poor relations only, notwithstanding the fact that all, wherever they might be situated, were declared to be on the great St. David's gold lode.

That there was plenty of gold in the mountains was admitted, but the question was the best method of extracting it. No one was considered to have had a chance of success unless he had been in California, Australia, or some other gold-producing country; if he had been there he was passed as a gold extractor at once. The first gentleman who made his appearance in our midst was, of course, one who told us he had large reduction works of his own in California. He was, without loss of time, appointed manager of nearly all the mines in the district; and in carrying out his plans money was no object. His machinery was hurriedly erected in several of the mines simultaneously, and with what result is well known. Subsequently the Clogau directors, with their talented manager, went to Hungary to inspect and report upon the class of machinery there used for gold extraction. Plans, &c., were brought with them, and the same class of machinery was forthwith erected at several mines, and put to work without loss of time, at another great outlay, and pronounced by those who introduced it to be without fault. As much, I believe, as 25s. was paid to get a peep at this machinery, yet it was only short-lived, and has long since been thrown to the winds.

The next pretender was an individual claiming to be a practical engineer, who stepped into the arena with dry stamping and barrel amalgamation as a nostrum. His plans were received with every consideration, and at once ordered to be carried out; but a very short space of time was sufficient to prove, even to those but superficially acquainted with the subject, that (however he might declare that he had so far progressed satisfactorily, and that his plans simply required perfecting) the result would be even more disastrous than any that had preceded it.

His successor, the gentleman now in power, evidently believes there is nothing like plenty of water. He has the management of nearly all the companies in the district now extant—for many have already become defunct—and promises to give us three or four St. John's Rivers and Port Phillips in the course of a few months. He declares that we have only to erect plenty of stamps and our fortunes will be made; he promises a profit of 18s. per ton on ore giving 8 dwts. of gold to the ton of stuff. Now, supposing this may be generally true, there are many lodes which I have seen here that will not give more than 7 to 8 tons per lineal fathom, and that, too, ground that cannot be staked for less than 4l. per fathom; consequently, the breaking of the quartz only would cost over 10s. per ton, and to this must be added the extra expense of opening out the mine, and putting it into a position for stamping. The works at St. John del Rey are wrought economically, and I would refer to the cost of raising and extraction there. I assure that it cannot be done in many mines in this country for less than 20s. per ton. As to produce, we have the experience of one who has been 30 years connected with gold mining in Brazil, and who has had the management of one of our mines here during the last two and a half years, with a 12-head stamp at his disposal; yet we find that gentleman only working his stamps, perhaps, once a month, in order to test the value of the samples from the various lodes on which they are working. And he is compelled reluctantly to inform his directors that the quartz does not contain gold in paying quantities. Of course, the success of one mine is no criterion for the results which will be obtained in another, but it proves how little value should be attached to Brazilian experience as a guide for Wales, gold mines, and how easy it is to make estimates which results show cannot be carried out.

A LOOKER-ON.

Dolgelly, Dec. 14.

## A CHRISTMAS EFFUSION.

Sir,—I have read "Mrs. Lirriper's Legacy," which, as the public well knows by this time, consists of seven chapters; the first, and I think, the last, of which are the handwork of the great magician of the age, whose name need not be mentioned. The inside chapters have merit, but contain reading of a sensational character, calculated to amuse but not to instruct; and thus the whole work resembles a sandwich, the exterior of which is like sweet new bread, whilst the interior is—but by comparison only—of the indifferent ham or beef. The news of, and search after, "Mrs. Lirriper's Legacy," which she travelled to France to secure, contains, however wrapped up in the clever story, some interesting satire worth remarking upon. There is a railway company got up at the lodgings in the writer's happy style, called "The United Grand Junction Lirriper and Jackman Great Norfolk and Parlour Line," the shares in which were "10 for 9d., with 12 preference, at 1s. 6d. each, signed and countersigned," and, adds our author, "match the money for the money (then) there, I have given for my time." It is much to be doubted if this facetious mode of stating some grievances, towards which heavy complaints are due, of a vast number of public swindlers which have, during the present year, been ushered into existence, and amongst the rest, it is painful to admit it, in BARRIST MINE, some of them representing gold, non-existent in the mines; others, the inferior metals existent, but unremunerative, but all abstracting from the credulous portion of the public pockets very large sums of premiums. The panic of the last four or five months has, however, brought all these, and other anterior cruelties in mining, to their proper level of neglect, whilst the clarifying process has left a larger number of sound concerns, into which the public may advantageously, as speculators or investors, with better chances of profit and less of loss than was ever the case antecedently. It must be understood, however, if the truth must be spoken, that the purifying process is still going on, for the public still hold a large number of shares, which can only be sold, if sold at all, at nominal prices, most of them burdened with continual calls, both under the cost-book and the limited liability. Under the former system of transfer, however, an end can be made of them at any time by abandonment, but not so under the latter. Once committed to a limited liability, you must pay up the full extent, if demanded, unless you are provided always that the shares cannot be sold. The partiality of the public for limited mines is, however, still great, but waning; and there are cases where the limited sum is not large, that warrants its being tolerated; but as a system I think it had in principle, simply because the acquisition of large sums of money is liable to lead to its abuse; whilst under the cost-book the capital is only called when wanted, and with the entire concurrence of the shareholders. Here, then, is enough said, if a cogitation as to which of the two modes of constituting a mining company is the best be freely and calmly undertaken, not for promoters, but for the investing public.

There are some pleasant features in this year's operations in mines, notwithstanding, which will well bear remarking upon, especially as they illustrate the old saw, that "it is better to be born lucky than rich." Certain lead mines in Cornwall, and in the Isle of Man, have done wonders for a few individuals, by further enriching those who were already rich, and enriching those who were the converse of rich, although there is a nearer way of expressing the change. Imagine individuals toiling for a number of years of their lives without making much way, but on the contrary ploughing their courses over difficult ground, with very often bad times intermingled, and then all at once to find themselves possessors of estates in the country, and exhibiting their friends sumptuously every day. He must be an enemy of such individuals who does not rejoice at their good fortune, for since the concerns in question, which laid the foundations of the wealth, have largely benefited the public, nobody is the poorer for its accumulation in a few hands. As for others who have been placed in easy circumstances (and there are not a few), the stimulus is constantly in operation to seek out neglected mining properties, or to try new ground, particularly in Cornwall, where, according to a writer known in the Journal as "The Truro Correspondent," there is yet a vast area unexplored. Perhaps, then, one may look out for the advent of other estates in the country, or it may be mentioned in Belgium, for it is curious, but true, that "the appetite grows with what it feeds on." But who can estimate the invaluable advantages to mining which result from such successes, always supposing that a fair portion of that success be participated in by the patrons of mining enterprise. One lead mine it is known stands in the market at present at nearly 200,000l. profit, and there may be more such waiting the development which capital, science, and enterprise are sure to bring to its aid. The year 1865 will see much of this prediction fulfilled.

Now, a word as to what is the best course the public should always pursue in making choice of mining investments. A concern in 50,000 shares, subject to calls, makes the periodical contributions easy and light; even 20,000 shares is a large, and, indeed, a preposterous number, and in so constituting it an error is committed which can never be repaired, for it is found that mines in such numbers never come to dividends, and the reason is that, although profits may be made at one time or other, they are not on a sufficient scale to divide. The plan is an innovation of late years, and the leading object obvious—to cover a large sum of premium. No maximum number of shares can be laid down to suit all tastes, because GREAT LAKES, now a successful dividend mine, is in 12,500; 5000 or 6000 shares may be borne with. There are, however, a number of mines in 6000 shares now on their trial, and having been well, judiciously, and honestly selected, they rank, and deservedly, as legitimate undertakings. A novel feature on the question of capital is that of starting with one by laying aside usually a moiety of the first cost of the shares as working capital, out of which ample machinery is supplied, and the prosecution of the mine vigorously carried out. Under good manipulation of funds so provided, this new system cannot be too much applauded, it being pleasant to adventurers when they get round a table at a general meeting to be told that there is such a sum of money in hand as has no affinity to an immediate use of the cheque-book,

and thus when the time comes that the first capital may be exhausted, and the mine may be either a partial failure or a success, they have participated in the control of the expenditure, and are satisfied to provide more capital if necessary.

As the business transacted in the Mining Market ramifies to the utmost limits of the United Kingdom, including the Hebrides and beyond, a suggestion on the subject in the way of "advice to correspondents" may not be out of place, because I entirely dissent from a remark of one of my correspondents that "he does not confine his dealings to one party, being inclined always to embrace the lowest offer"—which, of course, everyone does—but since brokers or dealers in shares may be allowed an *amour propre*, as well as their friends, the plan I take leave boldly to state is not relished by the trading fraternity, or, in other words, they set more value upon a customer who wholly confides in, and does his business with him exclusively, because it generates a feeling of reciprocity, and stimulates the zeal to serve the customer on the lowest terms. In adopting a plurality of correspondents, when, for example, shares are wanted to be sold, the identical stock comes simultaneously on the market, multiplied by four or five, as the case may be, and as there are no means of concealing the multiplicity of applications, a discovery is at once made that all the shares belong to one person, and an independent broker at once retires from the contest as a seller, and may even be discourteous enough not to answer the letter, but the evil to the seller is that the price of the shares is by his own act lowered. It is scarcely necessary to remark that when this plan is adopted in buying shares, unless they happen to be of inferior value, the price advances, and although the lowest would be accepted, it would be beyond the rate at which they could have been procured upon a single order, and, therefore, the evil of employing a number of brokers is equally cogent in the case of buying as of selling.

As regards the coming year, and judging from the improvements in the market so unusual at the end of the present one, there will arise a better period for business of a profitable character than has been known for a long period. Money, although not absolutely cheap, is no longer excessively dear, nor likely again to become so, until a combination of circumstances again arise of a character similar to those which produced the disturbance, more of the character of a "cyclone" than of a mere panic, as witness the numerous and large failures in the commercial world, besides the injury already inflicted upon many other firms and individuals from being compelled for many months to pay rates of interest more than equal to profits. Of the result of the American struggle nothing can be foreseen, nor, yet, whether January 1 in Paris will produce any political continental revolutions. On the whole, however, things look hopeful, and should, as I have predicted, a good old time for business again arrive, its advantages will be participated in by all concerned in the conducting of mining business, but by those in particular who ardently wish the public to participate in the advantages of brisk markets, as well as brokers and dealers; and for myself I have only to add a simple wish that when the good time again arrives, "may I be there to see it."

JAMES CHAPMAN.

## Meetings of Mining Companies.

## GREAT WHEEL VOR UNITED MINING COMPANY.

A quarterly general meeting of shareholders was held at the offices of the company, Gresham House, Old Broad-street, on Wednesday, Mr. G. NOAKES (the Chairman of the company) occupied the chair. Mr. TRAUBER read the notice convening the meeting, and the minutes of the last were confirmed.

The report of the committee of management was as follows:—

It is a source of great satisfaction to the committee to report that the success which for a considerable period has characterised the mine is unabated. The various levels, as they advance upon the great shoot of tin extending from Metal to Ivey's shaft, confirm the belief that it will hold down in depth, and run through all the space of ground between those two shafts. The fact that the lode is continuous has been proved in the 147, 154, and 162, east of Ivey's shaft, and at the 162, west of Ivey's shaft, the lode is sinking through very rich ground. The lode at Ivey's shaft is now worth 400l. per ton, and gives good promise for depth; should it hold down to the 154, and continue productive from shaft to shaft, as indications warrant, it will open out an expanse of ore ground that will justify every prediction. The 157, east of Ivey's, is now emerging from the influence of the slide upon a large lode, which promises to be very productive. In the 162 east of Ivey's shaft, and in the 162 west of Metal shaft, now being driven to meet each other, the lode is remarkably rich—they are about 20 fms. apart, and promise to give an extraordinary run of rich tin ground throughout the whole level. On Thursday, Nov. 18, by the breaking of the piston-rod of the 85-in. engine, occasioned by it was afterwards discovered, by a hidden fall under the cap. It is, however, satisfactory to state that by the prompt energy of Capt. Gill the rod was removed to Hayle Foundry, repaired, replaced, and the engine again at work on Saturday, the 20th; and on Monday, the 22d, the men resumed their work at Ivey's shaft. Notwithstanding this accident, and the limited supply of water for dressing purposes, the returns have been well maintained. Preparations are being made at the dressing floors for facilitating increased returns. The sinking of Metal shaft has been resumed below the 154. Edward's shaft progressed satisfactorily. Much credit is due to the committee that at a cost of 1500l. the shaft was eventually cut at this shaft, which will greatly increase the present length of tin ground, and add immensely to the value of the mine. It is highly satisfactory to find by the following statement, taken from actual returns, that the average produce of the mine maintains its great promise. Ivey's shaft has been sunk 31 fms. through ore ground of the average value of 159l. per fm. The 147 east of Ivey's, has been driven 26 fms. through ore ground of the average value of 38l. per fm. The 167, east of Ivey's, has been driven 10 fms. through ore ground of the average value of 9l. per fm. The 157, west of Ivey's, has been driven 14 fms. through ore ground of the average value of 26l. per fm. The 162, east of Ivey's, has been driven 1 f. fm. through ore ground of the average value of 300l. per fathom. The 147, west of Metal shaft, has been driven 3 fms. through ore ground of the average value of 6l. 18s. per fathom. The 162, east of Metal shaft, has been driven 34 fms. through ore ground of the average value of 52l. per fm. The 162, west of Metal shaft, has been driven 51 fms. through ore ground of the average value of 73l. per fathom. The 174, east of Metal shaft, has been driven 30 fms. through ore ground of the average value of 100l. per fm. The 174, west of Metal shaft, has been driven 30 fms. through ore ground of the average value of 10l. per fm. The 154, east of Metal shaft, has been driven 9 fms. through ore ground of the average value of 9l. per fm. The 154, west of Metal shaft, has been driven 10 fms. through ore ground of the average value of 37l. per fm. Thus showing a total of ore ground passed through of 284 fms., and of the total average value of 80l. per fathom.

The committee, in contemplating the great success that has attended the development of the mine, the large reserves that have been accumulated, and the immense prospects indicated in the ground yet unworked, cannot but renew their congratulations to the shareholders upon the possession of a property offering the assurance of such great and permanent value. The present low price of tin has much diminished the profits, but the committee hope that, as great returns are anticipated to last for many years, they may yet see the return of prices that will yield them the full measure of commercial success.

The CHAIRMAN said, before submitting the report of the agent, he might mention that the statements contained in the report of the committee were, upon valuation, made up to the end of October; but, perhaps it would be interesting to the shareholders to know (from a statement he had made up within the last hour) the present aggregate value of the different points of operation at the existing low price of tin. Taking the whole month of November, the ground driven through was of the aggregate value of 1850l. per fathom, the average value of the 17 bargains being 95l. per fathom, which showed that the tin ground was considerably increasing in value. (Hear, hear.) He hoped that addendum to the report of the committee would prove satisfactory. (Hear, hear.) He then read the report of the agents, as follows:—

Dec. 19.—Ivey's shaft is sunk to the 162; the lode in the shaft is about 3 ft. wide, and is sinking, and the 400l. per ton is maintained. The shaft is being driven for the purpose of driving the 162, east and west of the shaft, and also for cutting plat, putting in penthouse, and preparing the shaft for sinking below the 162, which we shall resume next week. In the 162, driving east of Ivey's shaft, the lode is 3 ft. wide, and worth 300l. per fm.; this end shows good indications for improving shortly. In the 157, east of Ivey's shaft, the lode is about 3 ft. wide, and still under the influence of the slide; the end at present is worth 20l. per fm. In the 157, driving west of Ivey's shaft, the lode is about 3 ft. wide, and shows very good indications for further improvement. In the 154, driving east of Ivey's shaft, the lode is 4 ft. wide, and worth from 150l. to 170l. per fm. In a winze sinking below the 147, west of Ivey's shaft, the lode is 4 ft. wide, and worth 30l. per fathom. In the 164, driving west of Metal shaft, the lode is 3 ft. wide, and worth about 50l. per fm. In the 184, driving east of Metal shaft, the lode is about 2 ft. wide, and worth 20 per fm. In the 174, driving east of Metal shaft, the lode is 2 ft. wide, worth 50l. per fm. In the 174, driving west of Metal shaft, the lode is 2 ft. wide, worth 25l. per fm.; we expect an improvement in this end shortly. In the rise in back of the 174, east of Metal shaft, the lode is 2 ft. wide, worth 60l. per fm. In the winze sinking below the 174, east of Metal shaft, the lode is 3 ft. wide, worth 60l. per fm. In the 162, driving west of Metal shaft, the lode is 4 ft. wide, worth from 180l. to 200l. per fm. In the rise in back of the 162, west of Metal shaft, the lode is 4 ft. wide, worth 200l. per fm. In the 100, driving west of Ivey's shaft, we have a very large wet lode; it shows good indications for mineral, but poor at present. We have made very good progress in sinking Edward's shaft below 80, but within the last day or two the late rains have let down so much water that it has impeded our progress. We have six stops in course of working; they will average about 40l. per fm. All our machinery throughout the mine is in very good repair, and working well. Our prospects never looked better than at present.—THOMAS GILL, FRANCIS FRANCIS, STEPHEN HARRIS.

The CHAIRMAN said—He had great pleasure in submitting such reports as those just read, inasmuch as they confirmed the great and continued success achieved in the development of this property—a success so much the more grateful by the vicissitudes through which they had passed to attain it—a success that was now undoubted and established. (Hear, hear.) Time was when to whisper Wheel Vor required "a bold man and much courage," but that had happily passed away, and he trusted they had now arrived at a point that could be spoken of with "great courage." Confidence was a plant of slow growth, and of a very sensitive nature; for when once the bitter blast of adversity had chilled its tendril, it must be a long time indeed that would restore it to vigour. Such a sun had, however, beneficially shed its beams upon them, new life had sprung up—the life of a growing property, which had obtained for them a high position in the confidence of the mining world—and he trusted they would continue to merit a good opinion by working with that watchful care and economy that should ever characterise the development of mining property. The mine had absorbed his thoughts night and day—he had watched with intense interest and anxiety the development of every foot of ground. He could, therefore, but rejoice in the results that had been achieved. (Hear, hear.) He believed he had on former occasions referred to the reports of the committee, but he would again ask the shareholders to examine them for the last four or five years, for they would be found a faithful record of the position and prospects of the mine, and pointing to that success which was now being so signally fulfilled. (Hear, hear.) It was satisfactory to find, too, that those reports had been fully confirmed by independent testimony, and it was upon this ground that he took the opportunity offered to him of forwarding to the shareholders the report of Capt. Charles Thomas (of Dolcoath). Since then he had received a published report of another eminent "expert" (of South Wales), and it was remarkable to observe the unity of opinion in those reports, for the agents, for both those agents state that "it is the richest tin mine I ever saw." They are discovering fully 50 tons of tin a month more than they are taking away—and the property had been very favourably referred to by the Truro Correspondent of the Mining Journal. He had referred to these facts

merely to show that the property was beginning to attract the attention of thinking and observing men. If further evidence than the facts he had already stated were needed to show the immense prospects of this property, it was abundantly adduced in the fact that Mr. Divett—one of his colleagues upon the committee who was continually inspecting the mine, and who was by far the largest shareholder had never yet ventured to part with a single share. (Hear, hear.) When he (the Chairman) looked at the section, and considered the ground that was being opened up, his confidence was great as regards the present, as well as in that of the future; and if the shareholders would now follow him with their eyes while he indicated upon the section the various points in operation, they themselves would see that they possessed a property of immense prospects, and of present great and tangible value. Having pointed out by the section the different points of operation, he proceeded to state that stones of tin taken from the end west of Metal and east of Ivey's were so precisely similar that one could not be distinguished from the other—which was another evidence that the deposit of tin was continuous from Metal to Ivey's shaft.

Mr. PETER WATSON enquired the length of the unexplored ground between the ends? The CHAIRMAN said there were about 20 fms. Looking at that ground there could not be a divided opinion that the shareholders would reap from it a much larger measure of success than that already attained. For the lode, though strong under the slide at Metal shaft, was richer below the slide at Ivey's, which strengthened their belief that the lode would hold down strong and productive to, at least, the same depth it had already done at Metal shaft. They also had good prospects at Edward's shaft, in which they all had very good confidence. It was a significant feature that Edward's shaft was directly opposite the point which was the largest and richest part of the Metal shaft, the Old Vor lode, and which had produced such enormous wealth. It was also, like the Old Vor lode, between the two cross-cones. Of course, no one could tell what results would be achieved, but the inference was that Metal lode would be found equally as productive as had been the Old Vor lode. At any rate, the committee looked with the same confidence upon Edward's shaft as they had hitherto done upon the ground in Metal shaft. He then read the supplemental statement of accounts, as follows:—

The audited cash account to Oct. 31 last showed a balance in hand of £3711 7 10 Since which date there has been received—Tin sale, Nov. 17 ..... 3273 11 11 Ditto, Dec. 16 ..... 3580 18 3 Half-year's rent of Trellisick ..... 7 10 0 Sundries from the mines ..... 6 8 1

And paid—October cost, including merchants' bills ..... £1893 1 2 £10,884 16 1 Sundries, including travelling expenses of deputation to the mine ..... 28 0 5m 1,926 1 7

Balance (cash and bills) ..... £ 8,658 14 6 The actual account stands this day as follows:—Assets—Balance as above ..... £8,658 14 6 Old materials unpaid ..... 2 16 10 Total ..... £8,661 11 4

LIABILITIES—November cost, including merchants' bills ..... £2004 8 11 Sundry accounts, salaries, &c. .... 168 6 0m 2,172 14 11 Balance this day ..... £6,488 16 5

The CHAIRMAN said that although the accounts for the quarter did not give the full amount of the dividend, yet the committee, looking at the unparalleled position of the mine, that they had a good undivided surplus, and the immense amount of reserves that were being gradually accumulated, and remembering that the mine now had additional facilities for increasing the returns, recommended a dividend of 15s. per share. (Hear.) Major QUENTEN enquired the present value of the reserves?—The CHAIRMAN said that was at all times a very difficult question to answer, because he should be very sorry, in the position which he occupied, to pledge himself to any statement that should not be fully realised. The mining gentlemen present could easily see that the reserves in the mine were being gradually increased, and he might go so far as to state that, by a calculation he had made upon the value of the reserves, he believed that the reserves in the mine had increased in value during the quarter by 20,000l. That calculation was based upon the value of the levels as it appeared in the cost-sheet, and taking the backs at 9 fms. high, and reckoning the value of black tin at 62l. per ton. Upon that calculation it was estimated that there had been discovered 20,000l. worth of tin over and above the quantity taken away. (Hear, hear.) He might further mention that as much as two-thirds of the tin returned during the quarter had been from driving and sinking alone. (Cheers.)

Mr. E. COOKE enquired the date of the agent's report just read?—The CHAIRMAN replied that it was dated Dec. 19.

Mr. E. COOKE said that his reason for asking the question was that rumours had been industriously circulated in the market that a considerable falling off had taken place in various parts of the mine. Those reports, however, were now proved to be just as reliable as those of a similar character that were circulated for purposes best known to the authors.—The CHAIRMAN said it was possible to those rumours that Capt. Gill referred in his report of Dec. 10, when he said—"In the 162 west we had a little horse of illness in the end." It was reported that the lode had failed—I went down and put the men to take down the south part of the lode and I may now report that it worked out so well before." (Hear, hear.) And a letter received this morning states that "Capt. Francis has this instant come from underground, and he reports the mine is looking just the same as when I sent my report." (Hear, hear.)

Mr. PETHERICK did not suppose that the Chairman intended it to be understood that he computed the value of the whole of the reserves at 20,000l.—The CHAIRMAN said that he ventured to compute the increase in the value of the reserves during the quarter at about 20,000l. The value of the whole of the reserves in the mine, he believed, were less than 200,000l.—Mr. J. BAYNES said it could not be satisfactory to find that the reserves in the mine were being increased at the rate of 20,000l. per quarter. Mr. PETER WATSON enquired the amount of additional expenditure incurred during the quarter?—The CHAIRMAN said that an additional expenditure had been incurred by the placing of a second drawing-whim at Metal shaft. The profit for the quarter would have been much larger had it not been for that expense.

Mr. T. C. MUNDEY thought the shareholders should be apprised of some of the means adopted for depressing the market value of their property. He had been the means of circulating reports from well-known accredited agents, all of which more than confirmed those of the agents of the mine, and when these reports were issued, favourable as they were, and an advance took place in the shares, a reaction ensued within twenty-four hours. This was caused by various means, one being by the circulation of telegrams. One telegram, supposed to emanate from a person possessing very accurate information, ran as follows:—"The 162 west of Metal shaft, and the 152 east of Ivey's shaft, have failed." Those words had decreased the value of the property some 10,000l. or 12,000l. The object in view was plain enough to those who, like himself, as a dealer, knew that the operators for a fall had said "for time," to the extent of some 300 shares; and, therefore, they did as they possibly could in the meantime to depress the market value of the property.—he (Mr. Mundey) had to receive from a spectator shares to the value of 200l. at the end of this month. Consequently, by the sale of these 300 shares, and by the circulation of false and scandalous statements, these operators for a fall hoped so to depress the market as to enable them to buy back these shares at as low a price as possible. As regards the dividend recommended, it appeared to him that, inasmuch as the value of the reserves had been increased during the quarter by 20,000l., the committee were more than justified in increasing it to 15s. per share. He enquired what would be the cost of taking away the 20,000l. worth of reserves?

The CHAIRMAN supposed it would give at least one-third net profit. (Hear, hear.) The CHAIRMAN said he could not, from the position he occupied, enter into the question as to the price of the shares; but he might state that he should be happy at all times to give every information he possessed with regard to the position and prospects of the mine, never concealing the bad nor exaggerating the good.

Upon the proposition of Mr. MUNDEY, seconded by Mr. MORGAN, the reports were received and adopted.—A dividend of 15s. per share was declared.

Mr. WARBURTON had the greatest possible pleasure in proposing the re-election of Mr. G. NOAKES as the managing director, with thanks for past services. In accordance with the usual custom, he proposed that Mr. PETER WATSON, seconded by Mr. MORGAN, should be re-elected, and Mr. W. Moates was re-appointed auditor.

A unanimous vote of thanks to the Chairman terminated the proceedings.

## EAST WHEEL VOR MINING COMPANY.

A general meeting of shareholders was held at the offices of the company, Austinfriars, on Tuesday.—Mr. FOORD in the chair.

Mr. J. H. MURCHISON (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed.

A statement of accounts was submitted, which showed a credit balance (after paying the November cost) of 3108l.

The report of the agent was read, as follows:—

Dec. 19.—I beg to hand you, as requested, report of the above mine, which is situated a little to the east of the Old Wheel Vor Mines, and embrace precisely the same lodes that yielded in former years such immense quantities of tin. Our operations commenced on March 21 last.—Old Wheel Vor Main Lode: The engine-shaft was sunk by the former company 5 fms. 6 in. below the 60, since which the shaft has been sunk to the 60, and a new 12-in. drawing lift fixed from the 70 to the 60, and everything requisite completed previous to the sinking of the engine-shaft, which was immediately resumed, and is now down 7 fms. 1 ft. below the 70, through a lode averaging about 3 ft. wide, composed principally of bent, muddle, and blende, which is quite congenial in this locality for tin; the last 8 fathoms tinny throughout. The 70 east is driven 3 fms. 3 ft. through a lode 4 ft. wide, yielding small quantities of tin. The 70 west is driven 10 fms. 4 ft. through 20 lds. which averages 4 ft. 6 in. wide, producing tinny work. The 60 east is driven 24 fms. 1 ft. 2 in. through a large lode, which occasionally yields stamping work. The 60 west is driven 13 fms. 4 ft. 6 in. through an exceedingly kindly lode, and has yielded good tin stuff. A winze has been sunk in the 50 east to the 60, which now affords us good ventilation. The 50 west is driven 10 fms. 5 ft. 8 in. through a lode about 1 ft. wide, which is low price stamping work.—Smith's Lode: A cross-cut has been driven from the 60 plat 34 fms., which intersected the lode; we have opened on the same 3 fms. 2 ft. 6 in., and is about 2 ft. wide, composed of peach, priss, muddle, blende, and a little tin, with large streams of water issuing from it—a kindly lode. The 30 east is driven 15 fms. 6 ft. 9 in. through a lode about 1½ ft. wide, composed of gossan, muddle, blende, with a little tin. The 30 west is driven 3 fms. through a lode about 6 in. wide, composed of gossan and muddle, producing stones of tin. A rise risen in back of the same level 20 fms., through a lode averaging from 1 to 1½ ft. wide, which has yielded good saving work. A new shaft has also been sunk on this rise, and is made good within 14 fms. from the back of the 30. We have sunk a new 7-in. plunger from the 30 to the 40, also a set of in-door catches, and all necessary work effectuated. My advice to you is to drive east and west at the 60, on Smith's lode, as also the 70 west, on Old Wheel Vor Main lode, in order to drain the 60 on the lode before alluded to, that a winze may be sunk to procure ventilation for sinking the engine-shaft with all possible dispatch to reach the junction of Smith's and Old Wheel Vor Main lodes as quickly as possible, which by the present state of the underlie will be about the 100, and from the appearance of the various points of operation there is every reason to believe that this mine will soon take the position of one of the most productive and profitable mines, not easily to be excelled in Cornwall. In conclusion, I can only say I congratulate you on your extensive and valuable property.—JAMES FOLLAND.

The CHAIRMAN having proposed that the report should be entered on the minutes, and that the accounts should be passed and allowed, and that in the presence of so many who were much more familiar with the distinctive and admitted merits of East Wheel Vor than he could pretend to be, it would be presumptuous on his part to refer to that property further than to state that from all the information he had been able to obtain there seemed every probability that when that important point, the junction of the lodes, was reached, each would have to congratulate the other upon being interested in



a property of such great value. He thought there could not be a divided opinion that East Wheel Vor, as a prospect, presented prospects second to none in Cornwall. Mr. G. HARRIS enquired the reason that the western part of the set, that nearest to Great Wheel Vor—was not being developed, for there was a very fine lode (Wheel Metal lode) close to the eastern boundary? He considered that alone, independently of all other points in the set, was one of the best speculations in Cornwall. Mr. PETER WATSON explained that at present they were directing their attention more particularly to the eastern portion of the set, to reach the junction of the lodes, which there could be no doubt was a point of the utmost importance, seeing what had resulted from the junction of the same lode in the neighbouring property—Great Wheel Vor.

Mr. SCOTCHFIELD said, by a reference to the plan it was seen that the set of East Wheel Vor was of sufficient extent to be divided into two or three mines. Mr. PETER WATSON, in reply to a question, stated that upon hearing of the lamented death of their secretary, Mr. Dunford, he (Mr. Watson), having a large number of friends interested in the mine, took upon himself the responsibility of convening the members of the committee at his office, for the purpose of taking into consideration the best course to be adopted in such an unfortunate emergency. At that time resolutions were passed, which he would ask Mr. Murchison to read.

The Secretary then read the minutes of the two committee meetings, to the effect that the pursuer (Mr. W. Watson) made application to the representatives of the late Mr. Dunford for all books, papers, documents, &c., belonging to the company; and that Mr. J. H. Murchison should be appointed secretary.

Mr. PETER WATSON was glad to be in a position to state that the pursuer, after a minute investigation of the accounts, found everything to be perfectly correct and in order. (Hear, hear.) He further mentioned that the leases of the property were in the hands of the company's solicitor and as regards the important office of secretary, the committee were unanimously of opinion they could not have appointed any person more suitable or efficient than Mr. J. H. Murchison. (Hear, hear.) He suggested that the minutes of the committee should be confirmed by the general body of shareholders. Mr. T. C. MUNDEY enquired how long the present lease had run?—Mr. SCOTCHFIELD (the company's solicitor) replied that the lease was for 21 years from March last. Mr. MUNDEY considered that entirely satisfactory. He believed that the property had been worked by a former set of adventurers, and enquired what had been the total amount expended?—Mr. SCOTCHFIELD said the former proprietors expended no less than 35,000l., to 40,000l., and 12,000l. worth of tin was sold. Mr. MUNDEY said, from the report of the manager, the prospects were of an exceedingly encouraging character. Mr. G. HARRIS reminded the shareholders that Great Wheel Vor did not reach anything like the 100 fathoms level, and, therefore, the prospect of the set, though it was a rich deposit of ore, was not with all its prospects at the present depth in East Vor could not be regarded as unusually favourable, about the 100 fms. level, on the north and south Metal lodes.

Mr. MUNDEY further enquired the difference of cost in the present as compared with the late management at the mine?—The CHAIRMAN considered it sufficient to say that the expenditure had been considerably lessened.

Mr. MUNDEY enquired what was the amount of the present monthly expenditure?—The SECRETARY replied that the last cost-sheet (which included two months' merchants' bills) amounted to 302l. Mr. PETER WATSON said that everything was now charged up to the end of November, so that, comparing with most other mines, the costs of East Wheel Vor might be fairly said to be six weeks in advance. As regards the future costs, he thought he could state that they would not exceed 250l. per month, so that the balance at the bankers would carry them on for a period of at least twelve months from the present time, by which period he hoped the junction of the lodes at about the 100 fms. level end would be reached. By reference to the plan it would be seen that the cross-cut put out to the 60 fms. level to cut Smith's lode was something like 64 fathoms long, but at the 80 fms. level would not be more than 15 fms. long, and at the 90 and 100—where the important junction was expected to be reached—the cross-cut would be still shorter.

Mr. MUNDEY enquired how long it was computed it would take to reach that junction?—Mr. PETER WATSON said that depended entirely upon the character of the ground. The lode in the shaft had considerably improved during the last few fathoms sinking. In Great Wheel Vor, where the two lodes came together, enormous deposits of tin were found, and there was no reason whatever that the same result should not be realised in East Wheel Vor. (Hear, hear.) They had in East Wheel Vor the Old Wheel Vor lode, which had yielded tin to the value of more than 2,000,000l., and divided among its proprietors enormous profits; in addition to this, they had in East Vor the now celebrated Wheel Metal lode, which in Great Vor was proving itself, as its development progressed, equally as rich and profitable as the Old Wheel Vor lode. The latter lode continued to produce its riches to a depth of something like 300 fms., while the Metal lode had as yet been wrought only to a depth of about 184 to 190 fms.—therefore, it was but a fair inference that Great Wheel Vor was now only in its infancy. As he had already said, they had in East Wheel Vor all the Great Vor lodes, as well as several others—in all, about ten lodes, the set comprising an area of something like 600 or 700 fathoms in width, and 800 or 900 fathoms in length. There could be no doubt that they possessed a very valuable property, and, regarding the market value of the shares, he might mention that they had been forced down to their present price by the failure of certain parties who held a large interest, but the whole of whose shares had been absorbed by the general public. Before the failure the shares were readily saleable at 5l. to 5½l., and the promoters themselves, by disposing of shares at the present quoted prices, would lose money by the transaction. He could only repeat that he believed East Vor would prove to be a mine second only to Great Vor.

Mr. MUNDEY asked why the merchants had not been paid, when there was so large a sum in hand, and discount would likely be allowed by the merchants?—Mr. MURCHISON stated that only one meeting of the committee had been held since the affairs had been in his office; but at that meeting it was resolved to offer payment at once to the merchants if they would take off 5 per cent. Some had agreed to this, and others to deduct a smaller rate; but even this was better than interest on the money in hand from the bank at 6 or 8 per annum. Mr. MUNDEY was exceedingly glad to find it was so.

Mr. E. COCKE said it had been already explained that the shares had been depressed in market value by reason of a large number having been forced upon the market, owing to the failure of certain parties who held a large stake. He need hardly say that the price of shares was regulated by supply and demand, and at the particular time when those shares came upon the market nearly everything was unsaleable. By selling, however, at the present price was a loss even to promoters. He need hardly say that mining was a speculation; but, at the same time, there seemed every ground for believing that when this property was fully developed it would prove no mean neighbour to the rich Great Wheel Vor.

It was then resolved that the report should be entered on the minutes, and that the accounts should be passed and allowed. It was further resolved that the minutes of the committee should be approved.

Mr. PETER WATSON, in proposing that Mr. Teedale be elected a member of the committee, said that it was at all times desirable that the committee should comprise the largest shareholders, because for their own policy sake they would do their utmost to promote the best interests of the undertaking. Mr. EDWARD COCKE had much pleasure in seconding the proposition, and stated that Mr. Teedale had reaped a rich reward by holding his interests in Great Wheel Vor throughout the whole of its vicissitudes, and all he (Mr. Cocke) could hope was that the same successful result would attend him in his connection with East Vor.—Mr. TEEDALE, having been unanimously elected a member of the committee, stated that he would do his utmost to advance the best interests of the company. He mentioned that he had a large interest in Great Vor, and was one of the earliest shareholders. Many years ago, when the winding-up of Great Vor was talked of, he (Mr. Teedale) strongly supported the committee of investigation in their recommendation to continue the operations.

A vote of thanks to the Chairman terminated the proceedings.

#### ST. JUST UNITED TIN AND COPPER MINING COMPANY.

The third annual meeting of shareholders was held at the offices of the company, Finsbury-place South, City, on Wednesday, Mr. JAMES WRIGHT in the chair.

The subjoined directors' report, and the accounts, were read and passed.

The directors, at this third annual meeting of the shareholders, had hoped to have it in their power to report a more favourable result than they are enabled to do; and they have to express their regret that the mine is not yet in that position which Capt. Cartwright had so confidently assured them it would be were he permitted to exercise his discretion in carrying out the works. It is now, however, no longer a matter of doubt that the confidence placed in him has not been justified, that the hopes he held out have been perfectly illusory, that his alleged existence of a rich and immediately productive copper lode was a misrepresentation, as well as the promised monthly returns of tin. The failure of these flattering expectations suggested to your directors the necessity of a personal investigation on the part of one of them, and Mr. Ogilvie consequently visited the mines in August last, accompanied by Capt. Richard Pryor, a gentleman thoroughly acquainted with the management of tin mines. The result of that visit was a strong conviction of the necessity for an immediate change in the local management. Capt. Cartwright has consequently been removed, and the farther direction of the mines placed in the hands of Capt. Pryor. From that gentleman's report, you will see that he entertained strong hopes of ultimate success, which has been retarded not only by the injudicious and imprudent mode adopted by our late manager, but by the continued depression in the price of tin. Differing from his predecessor, Capt. Pryor feels assured that the success of these mines depends mainly upon fresh ground at greater depth—an opinion fully warranted by the surrounding paying mines, which realised their wealth at deeper levels; this work he is now prosecuting, and is opening ground which gives good prospects of rich lodes. With the exception of one or two upper levels, which continue to yield a small payable metal, he has stopped a considerable amount of tin, and slopes on low ore, whereby a very considerable monthly saving will be effected; and by adhering to this mode of operation, he believes that, in the course of a few months, the returns will exceed the cost. On reference to the accounts, it will be seen that the quantity of tin sold during the year is 227 tons, realising 14,531l. 6s. 6d. Although the disappointment hitherto attending our operations has been great—a disappointment attributable not to the mines themselves, your directors are yet strongly of opinion that their success is a question only of time—an opinion based on the fact that, notwithstanding the comparatively poor ground upon which the works have hitherto been extended, a large quantity of tin has been obtained, amounting in the aggregate to the value of 97,602s. 4s. 6d. This fact should give encouragement to the shareholders, and they may reasonably expect that even a moderate improvement in the value of the lodes, added to a slight reaction in the price of the metal, will shortly place these mines in a position most satisfactory to all interested.

The CHAIRMAN regretted that they had not a more favourable report to present to the shareholders, and the only reason they could give for it was the greatly depressed state of the tin market, and the exaggerated statements made by Capt. Cartwright as to the returns promised from time to time. The directors had felt it their duty to make a new appointment, in the person of Capt. Richard Pryor, who has taken the management, and whose reports are highly satisfactory as to the results.

Mr. BRUCE complained that the directors had not taken the step before of appointing a new agent; they had been so deceived by reports and statements made by Capt. Cartwright, that the directors must for a long time past have lost all confidence in him.—The CHAIRMAN replied by saying that many of the shareholders felt a strong leaning to their late manager, in consequence of his bold statements and over-sanguine reports, that the directors felt some delicacy in coming to a decision on the matter, but they had every hope the change would prove greatly advantageous to the company.

Capt. PRYOR gave the meeting his views as to the future prospects of the mine; they were now sinking in virgin ground, where the prospects are very promising. His opinion was that should be able to raise 18 to 20 tons of tin monthly, which he believed, with their reduced cost, would in future pay expenses; and if they could see a little rise in the tin market, they might rely upon profits. He had also a strong opinion of the lodes improving in value in depth.

A Special General Meeting was afterwards held, to propose a resolution for the issue of 200 additional shares, at 2l. 10s. each. The Chairman remarked that the directors considered it would be preferable to increase the number of shares rather than call up the remaining portion of the old capital. He was prepared to take his own proportion (and he was the second largest shareholder); he hoped every proprietor would see it was to his interest to do the same.

The resolution was carried unanimously, and after the usual vote of thanks to the Chairman, the meeting adjourned.

#### CENTRAL AMERICAN MINING COMPANY.

The half-yearly general meeting of shareholders was held at the company's offices, Queen-street-place, yesterday.

Mr. CHARLES MORRIS in the chair.

Mr. HENRY THOMAS (the secretary) read the notice convening the meeting, and the minutes of the previous one, which were confirmed.

The subjoined report of the directors was then submitted:—

The shareholders are aware that the usual period for holding the half-yearly meetings of the company is in November, but as some operations of much interest were in progress at the time, it was the wish of the directors to report more fully on the prospects of the undertaking than they were then prepared to do, and therefore deferred it to the present time. Later intelligence from the mines does not even now enable them to do so fully as they could wish, some of the workings requiring still further extension for that purpose. The report submitted to the last general meeting conveyed the intelligence of a considerable decrease in the returns from the San Pantaleon Mine, and a fear that the funds of the company would be barely sufficient to carry on the new works of trial which were commenced. The directors regret to state that, although the mines have in some respects improved, the difficulty as to funds is still one which causes them considerable anxiety. A statement of the costs and returns for the first half of the present year accompanied the circular notice convening the meeting, from which it appears that the operations during that period resulted in a loss of 1322l. 5s. 7½d., of which, however, the sum of 318l. 14s. was expended on account of the purchase of San Carlos Mine, which will be presently referred to. The directors regret to state that the accounts since received, for the three months to September, show a further considerable loss, whilst the stock of ore at the hacienda and mines has been brought down to a small quantity. The operations at the mine have been carried on with great regularity, except during part of October, when, owing to the unusually wet season, the deeper levels in San Pantaleon Mine were flooded; but the water was again decreasing, and the driving of the levels would soon be resumed. The Guadalupe, which is the deepest level, and 50 fms. under Dolores adit, has been driven east of Cornelia engine-shaft so far as No. 2 cross-course, and is being continued northward, with the object of finding the lode on its eastern side, after driving the length of the heave. It is of great importance to prove whether the lode in this level will resume the productiveness which characterised the upper level, and which has been broken only in descent by the San Alfonso, or 40 fms. level, in which the lode has yielded so far but little ore. In consequence of this, the Alfonso level, not opening round to replace the stopes in the upper levels, the reserves are nearly exhausted, and fresh discoveries are necessary to restore San Pantaleon Mine to remunerative working. The surface workings, established in search of the lode east of the great cross-course, have so far been fruitless, but further examination is being made in the San Juan level, where good silver ore existed as far east as the cross-course. The deep adit, or San Alfonso level, has been continued at several points: the first section, which will communicate it with Taylor's shaft, was expected to be completed in November, when the drainage would be materially facilitated, and expense saved. The second section, between Cornelia and Taylor's shafts, is expected to be completed in six months from the date of the last report. Viz., Oct. 31. A great facility will thus be established for the economical working of San Pantaleon lode, and the directors anxiously wish for such improvement in its productiveness as will enable them to make the level of great use, after so large an expense has been incurred in its driving. In San Antonio Mine the character of the ore having changed so considerably as to render its reduction unprofitable, and the lode having also been found poor to the east of the cross-course in San Ramon adit, the operations have been suspended. In the smaller trials, in adjoining mines, no ore of importance have been discovered, and the prospect of the great mine's success does not seem to be in their continuance. Since the last general meeting the mine has become possessed, on highly favourable terms, of the mine of San Carlos, which is in high repute in Guatemala, and of which very satisfactory reports were furnished to the directors. The payments made on account of this purchase, and included in the account now submitted, are equivalent to 318l. 14s.; and there remains a further sum of 500l., or 1000, due in May next, to complete the payment for what is probably a very valuable mine. San Carlos is situated about 500 fms. east of San Pantaleon, and is believed to be on the same vein. The intermediate space has also been denominated, so that a great addition of mining ground is available to the company's operations. The mine is now being regularly and efficiently prosecuted. The shallow adits on two lodes—viz., Carrera and Duarte's have been cleared, and ore ground found available at once for stopping, so that returns were immediately made—viz., for June 8 tons 13 cwt., at a ley of 55½ cts. per ton=480 cts.; July, 17 tons 14 cwt., at a ley of 72 cts. per ton=1274 cts.; August, 16 tons 13 cwt., at a ley of 42½ cts. per ton=708 cts.; September, 16 tons 16 cwt., at a ley of 78½ cts. per ton=1319 cts.; October, 19 tons 16 cwt., at a ley of 91 cts. per ton=1801 cts., making a total of 79 tons 12 cwt.=4482 cts. of silver. The production in the last month from the mine was 600 ounces. A deeper adit is now being driven east, which may soon be expected to reach the ore ground wrought in the shallow adit, and another adit level is commenced to cut and drive on the lode westward in high ground in the direction of San Carlos. The south, or Duarte's lode, is also being worked, and all the operations in San Carlos are of great interest. The directors having thus described the state of the mining operations, which they much regret should have resulted in loss during the present year, have now further to report to you that the costs have been considerably reduced, and that further reduction will follow until increased returns call for a proportionate increase of expenditure.

It is, however, to be regretted that unless the works in progress lead to some immediate discovery the produce will not be equal to the expenditure, pending the important trials in progress, and indeed they have already found it necessary to open a provisional credit for 1000l. with Messrs. Klee, Skinner, and Co., in Guatemala, to be used in case of need by the superintendent. The home funds are also exhausted, and the directors may find it necessary to call the shareholders together to consider and determine on the best course to be pursued before the usual period of holding the annual general meeting, in April next. They hope, however, that, inasmuch as the mine is now in a position to render this step unnecessary, they may be permitted to submit that it seems highly probable that some additional capital, at any rate, a temporary advance of money will be required.

In conclusion, the directors have to announce with great regret that Mr. John Phillips, who has acted as the secretary of this undertaking from its commencement, has been obliged to retire from impaired health. His services have been of essential value to the directors, and his courtesy and consideration towards the shareholders have been universally admired and acknowledged. The directors are grieved that the finances of the company do not at this moment justify them in recommending a substantial mark of the shareholders' appreciation of Mr. Phillips' services, but at the next general meeting they propose to move a resolution that an appropriate testimonial of their high esteem and value attached to his past services be presented to him.

The CHAIRMAN, in moving the adoption of the report, said that he wished it had been his to present a more favourable one. They were aware that the meeting should have been held in November, but the directors had postponed it in order that they might be in possession of the last report, to see what turn would take place in the mine, and thus have some guide to enable them to decide whether there was any immediate necessity for further funds or otherwise. They were still less completely informed than they could have wished, but he thought they might possibly be enabled to go on until the returns from the mine relieved them, without additional capital; this was, of course, an anticipation only. But they must remember that the San Carlos Mine gave them very great promise. It was a rare instance for a mine, in so short a time, not only to capital, but to leave a profit. With regard even to San Pantaleon, he thought that the shareholders ought not to be disheartened, for it was the nature of the ground in the district to be poor at one time and very rich at another; so that they might have got into ore again by the time the next report was written. He did not think the meeting would consider too much had been said with regard to the services of Mr. Phillips, but that all would entertain the same opinion as that expressed in the report. For his own part, he believed that the very continuance of the company was, in a great measure, due to Mr. Phillips' energy and perseverance.

Mr. HARRIS considered that the part of the report acknowledging the debt due by the company to Mr. Phillips fully compensated for the somewhat unfavourable character of the report, owing to what he believed was only a temporary falling off at the mine. He believed that not one word more than he deserved had been said, for he could testify to the great courtesy and kindness he had always received from him.

Mr. J. C. WRAY having alluded to Mr. Phillips' courtesy, both in connection with the Central American and the Bella Raquel Companies, Mr. J. TAYLOR said that he felt extremely regret that Mr. Phillips' connection with the San Carlos Mine had not been alluded to at the last board meeting, but the fact was the board were busily engaged in discussing questions of urgent importance in connection with the mines, and the matter had been entirely overlooked. They all felt that it was a great omission, which they would gladly rectify.

Mr. J. C. WRAY enquired whether the San Alfonso level was not alluded to as being poor, and if so were the case, how it could be expected that the level referred to as below it was likely to give any important results?

Mr. TAYLOR said that the deeper levels had not carried off the ore which they anticipated. The San Alfonso level, which was the tin level, was very nearly completed, and the ground was being worked to the level of the tin level, which was to be pumped to the shallow adit, and thus lessen their expenses. The great point in the mine was the discovery of the vein to the east of the cross-course, or fault, for they must remember that the shallower levels had been good quite up to the fault on the western side. Luckily they had acquired the San Carlos property, and as the workings progressed here (the San Carlos is only 500 fms. from the San Pantaleon, and is considered to be on the same vein) they would be guided as to the position of the vein on the east side of the cross-course in San Pantaleon. With these there was just a possibility of struggling on without further capital; but it was desirable that the shareholders should know their actual position, and that there was some slight difficulty in raising additional capital, owing to the nature of their present shares, some being ordinary and some preference. The preference shares were, no doubt, the best means that could have been adopted for raising the capital at the time the course was adopted, and had the profits at the mine continued for a year or two longer there would have been no difficulty with respect to them, but there was still 8000l. due on this preference stock, and upon this interest was accumulating. How the difficulty could be best met in the event of additional capital being required had not yet been considered by the board, so that whether the preference shareholders could be induced to merge their shares by capitalisation, and thus get rid of the accruing debt, he could not say; whatever proposition was made it would have to be equitable and generally attractive to ensure its acceptance. At present the company was not in debt, but if the directors saw that the operations at the mines were being crippled for want of money the shareholders would at once be called together to decide upon what was best to be done. The agents in their exertions to pay off the preference shares had drawn upon the reserves, perhaps too rapidly for general mining practice, but the only thing was that the money had been got out of the mines as quickly as possible, for the simple reason that they were that more upon length than depth of the veins.

Mr. HERRICK enquired whether he had correctly understood that the company was at present 1000l. in debt?—Mr. TAYLOR said that he certainly had not. They had sent out an authority to Messrs. Klee, Skinner, and Co., of Guatemala, to advance to the extent of 1000l. in case of any temporary necessity for it arising at the mine, but they were not aware of any money having been advanced upon that credit. Happily they could not get very deeply into debt in Spanish countries, for the simple reason that no one would trust anyone else. They might hear of a mine being stopped, but there could never be much debt incurred.

In reply to a SHAREHOLDER, who enquired whether the San Carlos Mine was an old or a new one, Mr. TAYLOR said that all the lodes in the district were more or less scratched, but the San Carlos was comparatively new. They had kept their eye upon it for some time, until at last an opportunity presented itself for acquiring it upon very favourable terms; they had bought it for less than 500l. The property was but 500 fms. from San Pantaleon, and, as they had denominated the ground lying between, a large acquisition to their mine had been made.

Mr. JOHN PHILLIPS said that he could not let the present occasion pass without expressing his gratitude for the very handsome manner in which they had acknowledged his poor services. He was entirely at a loss for words to express his feelings, but he must beg them to be satisfied with his saying that he was most grateful to them for

what they had said. Mr. Taylor had referred to the removal of the reserves from the mine, and he admitted that they had been removed, perhaps, faster than the general mining practice would justify, but they must remember that they had the heavy cost of the great desire to pay off the preference shares as speedily as possible. Again, there was a great desire to support the lower levels would turn out as poor as they had done until they were actually driven, when they were found to turn out less productive. He thought they had full right to expect other discoveries would be made, and he was not quite sure of the policy of suspending operations in depth, for there were many instances of a things to this had occurred at Old Wheel Friendship, where the adventures persevered and came into better ore than that which they had left above.

The report was then unanimously carried, and the usual complimentary vote terminated the proceedings.

#### ST. JOHN DEL REY MINING COMPANY.

The half-yearly general meeting of proprietors was held at the London Tavern yesterday.

Mr. JOHN HOCKIN (the managing director) in the chair.

The notice convening the meeting having been read,

The CHAIRMAN said:—Before I proceed to the business of the meeting I must express regret that, on the present occasion, we are deprived of the services of our Chairman by temporary absence in Portugal. He has so ably filled this chair—now for thirty-four years—and our late lamented colleague, who usually acted as deputy in his absence, was also an efficient chairman, and a man who as much as myself may be excused for feeling nervous on taking the chair they so well filled. The board has, however, done me the honour to elect me Chairman of this meeting, and, however much I may differ from them as to the wisdom of their choice, I had no option but to submit to their decision. Under these circumstances, I feel sure that the meeting will extend to me their indulgence whilst I endeavour to perform the duty thus imposed upon me, and should I be guilty of any shortcomings, that they will attribute it more to the novelty of my position than to any intentional omission on my part. Under the circumstances, I feel in the advice for the last six months, the shareholders will have been prepared for a report of an unsatisfactory character. The accounts, which were fully detailed in the advice received at the time, and which are briefly recapitulated in the first two pages of the report, show us almost entirely from the Bahia Mine during the half-year. It is this circumstance alone which is the cause of the small amount of gold produced, and consequent absence of profit and dividend. Had we been able to quarry the usual quantity of ore from the Bahia Mine, we should have met you with a very different result, and we have no doubt that when we are able to extract a full proportion of ore from the mine, we shall again return to our previously existing state of prosperity. The lode in this, the best section of the mine, is reported to be larger and of quite as good quality as at any previous period, and it only remains that the ground above the lode be secured in a thoroughly substantial manner to enable us to extract it. No doubts are entertained as to the practicability of securing these works in such a way that there may be no question as to their future stability. There are ample means at hand, both in men and materials, but it has required time, much more time indeed than was anticipated by those on the spot, best acquainted with the mine and mine works. It must be borne in mind, that as the work of repairs proceeded, impediments most provokingly arose almost at every point. The effects of the first accident had been overcome by the end of August, when a piece of timber falling broke through the hauling very much higher up the shaft, and again put a stop to all work in this mine. No sooner had the hauling-way been repaired than a further delay was occasioned by the scaling off of portions of the lode from the north wall, near where the accident of 1857 occurred. The work had been accomplished by the end of October, and it then only remained to clear the Bahia Mine of this stone thrown down from the walls and other lumber, to commence working the lode. On this subject Mr. Gordon writes, Nov. 17:—"To get the mine in a thorough state of repair and good working order, an extra force of timbermen are required, the consumption of timber will be a great deal, and we shall hardly be able to obtain full returns from the bottom of the mine before this, in a measure, is accomplished; when we arrive at that period, I have every reason to believe that we shall have seen and heard of the prospects in the Bahia, that Morro Velho will again rank with the best mines in the world. I believe it only requires time and patience to bring this event to pass. Amidst so much that is unsatisfactory, it is pleasing to turn to one very satisfactory circumstance referred to in the report. It is there stated that 'the loss of gold treatment, as shown in the monthly statements of 'Assays and Results,' furnished by the reduction officer, has been unprecedentedly small,' showing an increased amount of nearly nine-tenths of an oltava per ton of ore stamped, the money value of which, on the average of the quantity of silver stamped for the last four years, would be 28,877l., which additional saving, as the report states, is highly important, and, if maintained, will more than cover any additional expense incurred by the deeper working of the mines." (Hear, hear.) I may also call attention to the encouraging aspect of the question of working the mines from the Cachoeira sump has assumed. This measure, if it can be ultimately carried out, will be most advantageous. The width of the excavation at the Cachoeira sump is about 9 feet, whereas the width of the Bahia is from 70 to 100 feet. The difficulty and expense of erecting the mine machinery in an excavation of 9 feet wide, compared with one of 70 feet, will be apparent to all. It will be seen from the report that from the West Quebra Panella section of the mine, the extraction of gold has gone on steadily and satisfactorily during the half-year. As extended on the westward, towards the Timbuctoo section, the appearance is encouraging. Since that paragraph was written some further very interesting particulars have been received, which I will read from the head captain's report. It refers to discoveries considerably farther west than the West Quebra Panella section. It is as follows:—"Timbuctoo: We have cleared the shallow adit level from the tail to the Timbuctoo shaft, and explored the levels, as far as possible, in the cross-cut south. About 8 fathoms from the shaft a lode had been intersected and driven through; it was about 4 feet wide in the back, and 6 feet wide in the bottom, of good quality, composed chiefly of pyrites, and from the average of four assays the produce is 5-504 oltavas per ton of ore. The lode appears to be very solid near the bottom, and one assay there, from produced 8-095 oltavas per ton. We are now engaged in exploring this lode in opening on its course both east and west, and shall be able to give more particulars in the course of the coming month. This, I think, is likely to lead to the discovery of the Morro Velho lode still further west, and other good results. We are also engaged in clearing the tram level for a tramway to the west of the West Quebra Panella shaft; this will enable us to bring the stone quarried on the spot to the spalling-floors direct from the mine. I look on these as very profitable features, and hope they will lead to something good."

Mr. S. HERAPATH thought they had abandoned the intention of making the Cachoeira the main sump.—The CHAIRMAN said if it were found that it could be adopted it would most certainly be carried out.

Mr. JAGO enquired what would be the result if an accident were to occur at the Cachoeira sump, if that were the only one?—The CHAIRMAN said that those were questions which must be left to the practical miners upon the spot.

Mr. S. HERAPATH enquired if the fact that the walls and the accidents were owing to the concussion arising from blasting?—The CHAIRMAN said he had no doubt that the explosions had affected the walls, after they had been affected by the atmosphere. There was no doubt that these falls of ground during the last few months arose from an entirely mistaken idea entertained some four or five years ago of not clearing away the whole of the lode. For the last two years that had been admitted to be a mistake, and now all the lode was cleared out up to the walls.

Mr. ILLINGWORTH (a director) said the importance of the opinion of the chief mine captain with reference to the Timbuctoo development was manifest. There was a lode close to the surface already showing from 5 to 6 feet wide of good ore, containing from 5-50 to 8 oltas of gold per ton—that offers a good additional supply for future years. Mr. JAGO said that, looking to the reports published from the other side during the past few months, and the loss mentioned therein, he was surprised to find that the whole of the loss for the six months was put down at only 472l.

The CHAIRMAN said it had been often stated in the reports, and also from the chair, that the accounts published were not those made up in this country. There were two distinct accounts, and the hon. proprietor, who had put the question, being an auditor of the company, should know that one account was that of stores consumed during the month, and the other was on account of monies paid for stores purchased. For instance, the loss one month was published in the reports at 2300l.; but, as passed through the books in London, the loss was only 400l., the difference being in the stores taken out for consumption and those put in.

Mr. COPLAND said the reports of their manager had come home month after month, stating that the worst had been gone through, but there had always been something to prevent his anticipations being realised. He wished to know if their manager was really an efficient man?—Mr. ILLINGWORTH said the best reply to that question was the fact that during the past four years there had been paid 6l. per share per annum. (Hear.) Mr. HERAPATH suggested that the directors should instruct Mr. Gordon to render his reports in future more concise and less wordy, as they used to be.

The CHAIRMAN said he believed that rested with himself, for instead of making extracts from the letters, as was formerly done, he preferred sending to the shareholders the letters entire.—Mr. COPLAND hoped that would continue to be done.

After some further discussion, the CHAIRMAN proposed Mr. Bonamy Price to a seat at the board, rendered vacant by the death of Mr. Bosworth.—Mr. HASTINGS seconded the proposition.—Mr. HERAPATH protested against the board exercising a power with regard to the appointment of a director, which was clearly an invasion of the rights of the shareholders.—Mr. JAGO said he had been a shareholder for 24 years, and, though he was elected an auditor. Having served as an auditor for that long period, he considered himself as a director.—The CHAIRMAN said that the board had only pursued the course adopted on former occasions.—Upon the question being put, there appeared 17 hands in favour of Mr. B. Price's election, and 19 against, whereupon Mr. Price demanded a poll. Mr. JAGO and Mr. Herapath were also proposed. It was agreed that the poll should be taken at the offices of the company on Dec. 30. The proceedings then terminated.

#### FOREIGN MINES.

ST. JOHN DEL REY MINING COMPANY (LIMITED).—Advice received Dec. 3, ex steamer Onida, from Brazil:—

MORRO VELHO, Oct. 31.—Repairs in the Bahia Mine: By the French steamer I advised you of the delay we had experienced in taking down the scales and bank ground from the south wall in this mine, under No. 6 still, and that, in consequence, we were much longer precluded from working in the East Bahia than was at first estimated. This delay was occasioned by the amount of temporary timberwork which became requisite for the safe removal of the bank ground here referred to; and also from having to remove much more of the mass of mineral from this locality than was considered necessary on the first examination of the scales. As previously intimated, these scales ran up above the cross-pieces which support No. 5 plunger, and being also not far from the shaft-pieces, their removal was a work of some difficulty, and required much skill and good arrangements, so as to prevent injury to the timberwork below this horizon. I am glad to be able to report that the whole that is considered necessary to remove has now been taken down without any further casualty, and that this day the drawing from the East Bahia has been resumed, by Schneider's Kibble being put to work in that section of the mine. The greater part of the mass removed consists of mineral which will be available for the stamps, and, therefore, we shall now get, I hope, as much as the machine can haul from this part of the mine, though the quality of the whole will not be so good ore as the slopes under would give, if quarried in the regular way. We may now look for better produce from the Bahia Mine than we have had for many months past, though for a few weeks and while the clearing is going on we cannot expect a full return of gold from this important part of the mine.

In the CACHOEIRA MINE the work has gone on steadily, the sinking and sloping throughout having been carried on regularly during the past two weeks. There does not appear to be any alteration in the eastern and middle parts of this mine; but the lode towards the western part, where it has been rather small for some time past, now appears to be enlarging northward, as the present stopes pass through that section. The pillar and timberwork in this mine are now being pushed forward as much as our force can accomplish, and the general work of repairs is receiving due attention.

REDUCTION DEPARTMENT.—During the past fortnight the supply of mineral has been rather small, and the proportion of kilias it has contained more than usual, especially







various stops continues to look well. All other points continue without change to notice. We sampled yesterday a parcel of silver-lead ore. We shall now get ready to



parcel of best copper, about 20 tons, as early as we possibly can. The weather for the last two or three days has been rather severe, both frost and snow.

**SOUTH DOLOMATH.**—Wm. Roberts, Dec. 20: The lode in the 70 east is 1 ft. wide, producing stones of ore. At the flat-rod shaft the lode is 1 ft. wide, composed of fluor-spar and ore—of the latter turning out 1 ton per fm. In the winze sinking under the 20 the lode is nearly 1 ft. wide, producing good stones of ore. The 24 and the 12 east are at present unproductive. The tribute pitches are looking very favorable.

**SOUTH EXMOUTH.**—J. P. Nicholls, G. Maund, Dec. 21: The ground in the engine-shaft is much the same as last reported, and we expect by our next setting-down to get down the required depth below the 20 for tip-pit and fork. The western lode, in the 75 north, is 4 feet wide, consisting of barytes, white iron, and quartz. The 75 south being driven through disordered ground, and the lode split up in branches. The winze sinking in bottom of the 45, to ventilate the 60 north, we expect to communicate with the rise in back of the 60 in the course of two or three days. At the 45 north we have cross-cut through the lode, which is from 7 to 8 ft. wide, consisting chiefly of quartz, stained with goosan, the grey part of it being on the west wall, on which the level was driven. The lode in the end driving north of cross-cut is composed chiefly of quartz, containing a small quantity of fine-grained lead, and is soft and congeal. We are, therefore, daily expecting an improvement. The lode in the 30 north is at present unproductive; we have, therefore, suspended it for the present, and put the men to stop the back on the grey ground driven through, which for about 6 fathoms in length averaged from 5 to 6 cwt. of lead per fm., and is being stopped at 7s. 6d. per fm.

**SOUTH HERODFOOT.**—R. Goldsworthy, Dec. 21: The ground in the cross-cut west is spare for driving. In the cross-cut east we have made good progress, as the ground is more favourable. We have had to put in a set of bearers, to have the bottom lift, owing to the two bottom joints blowing. The water is very quick.

**SOUTH LOVELL.**—Wm. Chappell, Dec. 22: We have cleared the attic from off the bottom of the 20 east of shaft, and the 20 west of shaft, and the 20 east of the ground, where the lode is 1 ft. wide, worth 10s. per fm. This is 13 ft. west of the surface in bottom of level, the lode in which is still worth 25s. per fm. Owing to the surface water rising at the shaft, we are not able to do much on the best part of the stone; we are, therefore, driving west in the end left by the former workers, which is only 5 fms. below surface, the lode worth 10s. per fm.; here we have a long run on the course of the lode. I am now going to Penryn to make arrangements to have the engine brought over at once. The men are preparing the granite for the loadings, so that no time shall be lost in getting the engine to work, the mine in fort, and tin raised, which must be satisfactory to all shareholders considering the short time we have been working.

**SOUTH WHEAL GRENVILLE.**—G. R. Odgers, W. Bennett, Dec. 17: There is no change in the appearance of the lode in the adit west. We have nearly holed the shaft, so that we shall shortly be able to make good progress.

**SOUTH WHEAL LEISURE.**—J. Raby, Dec. 21: Our engine-shaft is sunk 43 fms. from surface, which is 15 fms. under the adit level, where we are driving a cross-cut north to intersect the great copper lode, which has been gone over for several fathoms in length at the adit level, where the lode proved rich for copper ore. There is a quantity of water coming from the end, which convinces me that we are close upon the lode. Should we cut the lode at this point as the level above (which, from the character of the country) we have no doubt we shall soon have a dividend-paying property in this mine. We are also driving a cross-cut south to cut the tin lode, worth for tin in slight a few fathoms from surface 10s. per fm.; this lode is opening going down, and looking very promising for a great improvement in depth. When this lode is intersected, through the medium of the cross-cut, it will be drained from this point to the surface, which will enable us to raise many thousands of pounds worth of tin ore. Immediately the pit is cut we shall resume sinking the engine-shaft, which in a few fathoms will cut junction of the lode, then I am confident we shall have a mine second to none in the district.

**SOUTH WHEAL TOLGUS.**—Dec. 21: Youron's Lode: The sumpmen are engaged at Michael's shaft in cutting trip-plate at the 150. The lode in the 150 east is 20 in. wide, unproductive. In the 150 west it is 20 in. wide, consisting of peach, spar, muncie, and stones of ore. The lode in the 140 west is 2 feet wide, composed of peach, muncie, spar, and stones of ore—a very promising lode. In the 130 west the lode is 18 inches wide, producing 2 tons of ore per fathom, and is promising for further improvement. We have two stops in back and two stops in bottom of the 130 west, each yielding 3 tons of ore per fathom. The lode in the 120 west is 15 inches wide, yielding 2 tons of ore per fathom. The lode in the winze sinking below the 120 west is 1 foot wide, producing 1 ton of ore per fathom. In the 110 west the lode is 15 inches wide, at present unproductive. The lode in the winze sinking below the 110, and 16 fms. in advance of the 120, is 2 feet wide, producing 3 tons of ore per fathom—a good lode. In the 78 west the lode is 20 inches wide, consisting of peach, spar, muncie, and stones of ore, and letting out a quantity of water.—New South Lode: In the 66, east of the rise, the lode is 10 inches big, opening tribute ground.—South Lode: In the 140 east the lode has not been taken down since last reported. The lode in the 130 east is 2 feet wide, consisting of peach, muncie, and stones of ore. In the rise over the back of the 120 east the lode is 20 inches wide, consisting of stockan and soft spar. Nothing has been done in the 100 east since last reported.

**ST. IVES WHEAL ALLEN.**—J. Nancarrow, J. Daniel, Dec. 22: The stop below the 10 is worth 4d. per fathom. The stop in the back of the 20 west is worth 4d. per fathom. The winze below the 20 west is unproductive. The winze below the 20 east yields a little tin. The stop east of the said winze is worth 3s. per fathom. The east stop below the 20 east is worth 4d. per fathom. The middle stop, below the 20, is worth 7d. per fathom. The west stop below the 20 is worth 4d. per fathom. The west yield a little tin. The 30 east is worth 8s. per fathom. Charles Frederick's is working on tribute.

**TIN HILL.**—John Martyn, Dec. 21: We are getting on as fast as possible with the completion of our engine, and although we have had some delays, owing to the inclemency of the weather, and other usual incidental circumstances attendant on such operations, I trust we shall get on so as to commence working in ten days or a fortnight at most. The water is now rising in our 9 fm. level so as to prevent our sinking there. In the meantime we have sunk a small shaft on our former back, where we are now getting tin on No. 2 lode for the purpose of getting on a parcel of tin for the market of first-rate quality, entirely free from muncie or other brood. In sinking the small shaft we came on one of the old men's cross-cuts, which intersected three lodes—Nos. 3, 4, and 5. I might add we have five lodes very contiguous to the engine-shaft, in fine kilns ground close on the junction of the granite and elvan. On the whole, our prospects are altogether cheering at present. Our mine is situated on the western slope of a beautiful little Cornish mountain, some 600 ft. in height, called in provincial language the Beken Hill (Beacon Hill), or in nautical language it being a sea mark, King Pippin's Mount. On the top of this mountain or hill the remains of an ancient British or Roman fortification, as the elevation is still distinctly visible, enclosing some 100 acres and half of plain level land. In the midst of this plain was a cairn or pile of stones, and as a great many of them appeared to be suitable for building our engine-house, I set men to work to take them out, and after clearing out to the depth of 7 ft. we came on a level platform of large flat stones 5 or 6 ft. in length, and after laying the same completely open and exposed we proceeded to lift the said stones, and underneath we found a complete stone coffin, or walling grave in the form of a coffin, about 7 ft. long, 30 inches deep, 15 in. wide at the end, and 2 ft. 6 in. at the breast. In the coffin there are about 4 gallons of ashes and few cinders, and the ashes I found a seal of yellow metal, in good preservation, with the Malcoff arms engraved in the stone. I have ordered the coffin to remain undisturbed for the inspection of the antiquary or other scientific explorers of ancient British remains.

**TORRATHE HEMATITE IRON.**—W. Williams, Dec. 10: There is no alteration to notice in the stopes in back of the western level, which still continue to turn out the usual quantity of ore. The western and from the new shaft is still being driven on in a fine course of ore. The winze below the Derrick stop is for the present suspended in consequence of such a quantity of wet weather.

**TRELOWEN.**—Thos. Richards, Dec. 22: In the 154, driving east from the engine-shaft, the ground is softer, and the lode has a more promising appearance for mineral. The lode east and west of the sump-winze, in the bottom of the 144, is worth 12s. per fathom. The 144 end, east of the sump-winze, is worth 8s. per fathom for copper ore. The 134 end east is worth 6s. per fathom. The 124 east is worth 14s. per fathom. The stop in the back of the 134 is worth 20s. per fathom. The stop in the back of the 124 is worth 6s. per fathom. The stop in the back of the 144 is worth 10s. per fathom. The winze sinking below the 80 fm. level is worth 3s. per fathom. The other bargains are without change.

**TREYON CONSOLS.**—R. James, E. Pooley, Dec. 22: We have taken down the lode in the 20 west of new shaft; at present it is damaged by a soft channel crossing it, and worth 6d. per fm. We believe it will improve again when driven beyond its influence. At Parry's shaft, sinking below the 40, the lode is worth 10s. per fathom. No other change during the week.

**TREVENAN.**—Wm. Arthur, H. Woolcock, Dec. 22: The lode in the 100, east of Hollow's shaft, is 2 ft. wide, worth 6s. per fm. The lode in the winze sinking below the 100, east of Hollow's shaft, is 1 ft. wide, worth 4d. per fm. The north lode in the 100, east of Hollow's shaft, is 1 ft. wide, worth 4d. per fm. The lode in the 90, west of Hollow's shaft, is split by a horse of granite. The lode in the 90, east of Hollow's shaft, is 15 in. wide, worth 3s. per fm. The lode in the 70, east of Hollow's shaft, is 15 in. wide, worth 4d. per fm. The lode in the 60, east of Hollow's shaft, is 8 in. wide, saving work for tin. The lode in the 40, east of Hollow's shaft, is 1 ft. wide, producing a little tin. There is no change in Dave's shaft since last report.

**TREVENAN AND TREMENHEERE.**—J. Medley, W. Tippet, C. George, Dec. 20: Our setting on Saturday runs thus:—The pit to sink at the 162 new sump. The shaft to sink 3½ feet, to take up the sinking lift, bring down the tyre, and put the shaft in complete order to sink below the 162, by eight men, at 38s. per bargain. The latter level to drive east of shaft, by eight men, at 5s. 10s. per ton; the lode is worth 10s. per fm.; this level to drive west of shaft, by four men, at 7s. per fm.; worth 4d. per fm.; a rise in the back, by four men, at 30s. per fm., and worth 5s. per fm. The 150 to drive west of the above shaft, by four men, at 70s. per fm.; poor. No. 1 stop in the back, by two men, at 20s. per fm.; worth 4d. per fm.; No. 2 stop, by three men, at 30s. per fm.; worth 8s. per fm.; No. 3 stop, by two men, at 30s. per fm.; worth 6s. per fm.; No. 4 stop, by four men, at 50s. per fm.; worth 9s. per fm. Trevenan engine-shaft is sinking below the 162, by eight men, at 17s. per fm.; the lode is disordered by a splice. The 162 to drive east of this shaft, by six men, at 70s. per fm.; worth 10s. per fm.; this level to drive west of the above shaft, by six men, at 5s. per fm.; worth 8s. per fm.; No. 1 stop in the back, by four men, at 3s. per fm.; No. 2 stop, by six men, at 30s. per fm.; worth 7s. per fm. A stop in the 140, east of old sump, by four men, at 30s. per fm., and 5s. in 11, worth 8s. per fm. The end is suspended for the present. The tribute department limited to seven men, at 12s. in 11.

**TREWEATHA.**—T. Fote, J. Scobie, Dec. 20: The lode in the engine-shaft is 4 feet wide, with a good branch of lead, worth for the length of the shaft (10 ft.) 10 cwt. of lead per fathom. The lode in the 40 fm. level north is without change since last report. In the 40 fm. level south the lode is 2½ ft. wide, producing 6 cwt. of lead per fathom—a fine-looking lode. The stop in the back of the 40 fm. level, north and south, are yielding about 4 cwt. of lead per fm. each. The men in the 30 fm. level south are still engaged in putting in air sump, and will have it completed by the end of the month, when there will be plenty of air to enable us to drive the end a considerable distance. The stop in the back of this level are not looking so well, now producing 6 cwt. of lead per fathom. The water in the last few days has increased, and our engine has at present quite enough to contend with to keep it; should we get a change in the weather, no doubt it will fall off again.

**TRUMPET UNITED.**—G. R. Odgers, Dec. 17: We have not taken down any lode this week in the engine-shaft, sinking below the 60. The lode in the 60 west is 9 in. wide, and worth 7s. per fm. The lode in the 25 west is small, but yielding a little tin. In the 15 west the lode is 6 in. wide, and worth 6d. per fm. Two stops below this level are worth 8s. and 6s. per fm.

**VALLEY OF TOWERS.**—T. Harvey, Dec. 20: Field's shaft is sunk 4 fms. 5 ft. below the 110; a vugh has just made its appearance in the sump, causing the ground to be favourable for progress, and the lode more productive than for some time past. We hope to be able to report fully on this point in our next. In the 110, south of the above shaft, the lode is 3 ft. wide, worth 1½ ton of blende per fm. There is a good looking rock in this end, and as water is now beginning to show itself, we expect soon to be forth in a rich lode. In the 124, south of Clay's, we have a change in the ground, and a more kindly-looking lode than hitherto. We are evidently getting into the run of the ground seen north and south of Field's shaft. In the 124, north of Clay's, the lode is 3½ ft. wide, composed of carbonate of lime, sulphate of barytes, and blende, the yield

being as last reported; this end is very wet, an indication that we are near the cross lode.—Tribute: Urea's pitch in the 154, south of Clay's shaft, is worth 1½ ton of blende per fm. Currie's pitch in the 110, south of Jones's winze, is worth 2½ tons per fathom. Jones's pitch in the same level, north of Field's, is worth 3 tons per fm. Williams's pitch in the 110, south of shaft, is worth 3 tons per fm. Richards's pitch in the 110, south of same shaft, is worth 2 tons per fm. Alzie's pitch in the 100, south of Wrenall's, is worth 1 ton per fathom. Rees's pitch in the 100, north of Field's, is worth 1 ton of blende per fathom.

**WHEAL AND BLOAG.**—A. Dean, Dec. 17: The new south part of St. David's lode in the shallow adit, is 2 feet wide, very good looking; and yesterday some good specks of large-grained gold were broken out. As we have only just cut through the lode, we cannot see more of it than the part in the end; I have no doubt this south part extends parallel to all the workings on the north part hitherto wrought, and if so it can be rapidly opened by cross-cuts from the levels and stopes. It will, probably, be the end of the month before the cross-cut south from the deep adit is through the lode; I have a notion that the south will turn out to be the main part of the lode.

**WHEAL (Gold).**—W. Vincent, Dec. 19: At Cefn Coch we are looking very well indeed; we put 36 cwt. of quartz through the Britten's these last two weeks, and it was 15 cwt. 15 grs. of gold, which will be set by post to-morrow. We are connecting the two boilers to-day, thus enabling us to drive our stamps faster, as well as effect a very great saving in the coals. We have completed the tramway from the stone-breaker to the new stamps, where the quartz falls from the stone-breaker into the wagon without any labour whatever, and which I call a beginning of the many such like things we must have, in order to do a great deal of work with a few hands, and which I think can be done when our erections are completed. The twelve head of stamps are working well, and at the end of the month I shall send you the yield of gold.

**WHEAL COBOL.**—W. Taylor, Dec. 20: The 18, on Grenville's lode, has greatly improved, and is now worth 18s. per fm., driving by six men, at 6s. 10s. per fm.; this level is entering into a good run of tin ground as seen in the level above. The rise in the 62, east of Robert's shaft, on engine lode, is worth from 18s. to 20s. per fm. for tin.

**WHEAL BASSET.**—Wm. Roberts, Dec. 20: Engine Lode: In the 124, east of Granville's shaft, the lode is 2½ ft. wide, producing good stones of ore—tribute ground. In the rise in back of the 114, west of shaft, the lode is 1 ft. wide, producing 1 ton of ore per fm. In the 104 west the lode is 2½ ft. wide, composed of spar, peach, muncie, and stones of good ore.—Middle Lode: In the 63 east the lode is 4 ft. wide, the south part producing about 1 ton of copper ore per fm., and the north part is good work for tin. In other parts no alteration to notice.

**WHEAL SHARP TOR.**—W. Richards, Dec. 19: Four men have driven the adit level 43 ft. in the past month, and the ground continues equally good for progress. We have suspended it for the time, and put the men to sink a little shaft down upon the end, whereby we shall obtain good ventilation, and be able to drive the end for half the price last paid. The part of the lode exposed in No. 6 cross-cut, in the 162 east, contains capel, peach, quartz, a little muncie, and yellow copper ore. I am glad to say the lode in the rise in the back of the 162, west of shaft, is improved, and will now yield 16s. worth of copper ore per fathom. The part of the lode carried in the 162, west of No. 4 cross-cut, although spare for working at present, yields 14s. worth of copper ore per fathom, and assumes a very kindly appearance. The part of the lode carried in the No. 5 cross-cut, I am glad to acquaint you, improved; it is composed of iron, kindly quartz, muncie, yellow and grey copper ore, and in the bottom of the end, and for 3 ft. high, it produces good good saving work. I am of opinion we shall have a further improvement here shortly. We shall use our best endeavours to resume sinking the shaft as soon as possible.

**WHEAL JANE.**—J. Smith, Dec. 21: The lode in the 40 fm. level, west of engine-shaft, is 2½ ft. wide, worth 32s. per fm. The lode in the 40 east is producing good stones of tin. In the winze below the 30, east of engine-shaft, the lode is 6 ft. wide, worth 15s. per fathom; this winze is sunk 3 fms. below the level, and has opened up a good piece of tin ground, which will be taken away at a profit as soon as there is a communication made to the 40. In the winze sinking below the 30, west of shaft, the lode is 5 ft. wide, worth 6s. per fathom. In the 20 east the lode is 5 ft. wide, producing a little tin, but not of much value. In the 20 west the lode is 6 ft. wide, worth 15s. per fathom, and improving as we drive. In the 10 west we are cross-cutting the lode to intersect the cross-cut adit east of the lode, the lode is 5 ft. wide, worth 7s. per fathom. All our stopes and pitches throughout the mine are looking quite as well as for some time past.

**WHEAL MARTHA.**—H. Rickard, Dec. 22: The lode in the north adit level is full 4 ft. wide, composed of goosan, spar, peach, and muncie, a very kindly lode, and letting out a little water. We are very busy in preparing a parcel of copper ore for the next sampling, which will be about 20 tons.

**WHEAL TOLGUS.**—Dec. 21: South Lode: Taylor's shaftmen have commenced to take down the lode in Taylor's engine-shaft below the 75; we have a branch adit of the engine-shaft, 12 fms. long, so as to get to the junction of the lode at its next week. The lode in the 75 east is producing fully 3 tons of ore, and the 75 west is producing 5 tons per fathom. In the 65 west the lode is producing fully 2 tons of ore per fathom; this level is improving. In the winze sinking below the 65 west the lode is 4 feet wide, yielding 4 tons of ore per fathom. The stop over the back of the 65 east, and the stop over the back of the 59, are each producing 2 tons of ore per fathom.—North Lode: The lode in the 65, east of Taylor's engine-shaft, and east of cross-cut, is 15 inches wide, consisting of spar and spots of ore. The two stopes over the back of the 65 east, and west of the rise, are each producing 3 tons of ore per fathom.

**WHEAL VOR.**—J. Southey, Dec. 21: Gundry's engine-shaft, sinking below the adit level, is down 14½ fms.; we have cut into the lode about 6 in., and find it retains its same kindly appearance; it is composed of spar, muncie, prlan, and good spots of tin, but not enough of the latter to value. Good progress is being made in the adit cross-cut, no lode yet being met with. The engine and pitwork are working well.

**WHEAL AGAR.**—W. Roberts, Dec. 21: In the rise in back of the 100, east of Wind-stow shaft, the lode is 3 ft. wide, producing good stones of ore. The lode in the 90 east is 2½ ft. wide, producing good stones of ore—a promising lode. In the 80 east of shaft, the lode is split into several branches, each yielding a little ore.—Western Shaft: In the 90 east the lode is 4 ft. wide, composed of stockan, spar, and stones of ore.—Dobree's Lode: In the 90, west of cross-cut, the lode has not been taken down for the past week. At the old whim-shaft the men have finished cutting pit at the 110, fixed penthouse, &c., and to-day I believe they will be prepared to commence sinking the shaft under the said level.

**WHEAL ARTHUR.**—T. Carpenter, Dec. 22: We have made a communication from the north engine-shaft to the machine-shaft at the 60, below adit, and shall be prepared to resume sinking the engine-shaft on Monday next, by 12 men, so as to get to the junction of the two lodes as quick as possible. Harris's stop in back of the 50 west, on old lode, is yielding about 3 tons of copper ore per fathom. No change in any other part of the mine since last reported. We shall sample on Friday next, December 30th, 80 tons.

**WHEAL CREBOR.**—J. Gifford, Dec. 20: We are making good progress with sinking Coker's shaft; no change in the part of the lode we have taken down. No change in the 96 west, or the stop in the back to notice. In the 96 east we are taking down the lode, but cannot say anything of its value, as we only commenced this morning. The stop in the bottom of the 84 east, east and west of Hollow's winze, is worth full 3 tons of copper ore per fm. In the 84 east no lode taken down since last reported. In the 72 east the lode still maintains its size, 4 to 5 ft. wide, yielding 1½ ton of ore per fm. The tribute pitches are without alteration to notice.

**WHEAL EDWARD.**—Geo. Rowe, Dec. 17: The lode in the 61 west is improving in character, and yielding some good saving work to the amount of 1 ton of ore per fathom, and likely to further improve shortly. We are again in contact with another vugh, from which a quantity of carbonic gas is ascending, and the water pouring up very strong from the bottom part of the level, which looks well for this part of the mine.

**WHEAL GRILL.**—Edw. Rogers, James Pope, Dec. 22: Fisher's Lode: In the 40, driving east of Annie's engine-shaft, the lode is 3 feet wide, worth 7s. per fathom. In the rise in the back of the 30, east of Grylls whim-shaft, the lode is small and poor. In the 10, driving west of Jones's whim-shaft, the lode is 6 inches wide, worth 1s. per fathom.—Standard Lode: In the 10, driving west of the western shaft, we have just passed through a cross branch; the lode is again making its appearance. We are expecting an improvement in this end shortly. In the 15, driving east of Badger's shaft, the lode is worth 1s. per fathom.

**WHEAL HARRIETT.**—S. Williams, Dec. 17: No change in the engine-shaft for the week. The lode in the 130 east is 6 in. wide, producing stones of tin. The lode in the 115 west end, from middle cross-cut, is 1 ft. wide, worth 10s. per fm. The north lode, in the 115 west end, from east cross-cut, is 2 ft. wide, producing good stones of copper ore. The north lode, in the 115 east end, from west cross-cut, is 6 in. wide, poor. The 115 north cross-cut is progressing favourably.

**WHEAL HOPE.**—D. Rees, Dec. 20: In the 55 east there is no alteration since last report. In the 65 west, on the south part, the elvan has turned its head north, and cut out that part of the lode, and it appears to me that this is gone into the north part going west. I think it advisable to drive the 65 west on the north part of the lode, as there was a good shoot of lead from surface down to the 48, and we have now two pairs of tributers working in the bottom of this level, a little in advance of our 65 end. The 48 is progressing favourably. All the pitches are looking much the same.

**WHEAL KITT.**—V. Leland, W. Williams, Dec. 22: North Ruscoe Lode: We have holed the 110 winze to the 140 rise. This communication has thoroughly ventilated this part of the mine.—Gowan Lode: In the 100 cross-cut, north of Rogers's shaft, we expect there are about 6 ft. more to cut the lode. In the 90 east end and west the lode is at present small. There is no change to notice in the 90 cross-cut driving south of the Gowan lode. The lode in the 80 east end is worth 4d. per fm. In the 80 end west at present the lode is not of any value. The winze sinking below the 70, east of shaft, is worth 4s. per fm. In the 70 end west the lode is small. The stop over the 70 is worth 40s. per fm.

**WHEAL LITTY (St. Agnes).**—S. Davey, Wm. Polkinghorne, Dec. 17: Holgate's Shaft: The lode in the 82, driving west of shaft, is showing a better appearance, with occasional stones of tin, but not to value.—Pryor's Lode: In the 65, driving east of new shaft, the lode is 1½ ft. wide, and worth for tin 9s. per fm. In the 65, driving west of shaft, the lode is 4 ft. wide, worth for tin 22s. per fathom. From the appearance of the ground in the 54, east of shaft, we believe we are nearing the lode, and hope in our next to report of its being cut. In the 54, driving west of shaft, the lode is 3½ ft. wide, and worth for tin 12s. per fm. In the 44, driving east of shaft, the lode is worth for tin 12s. per fathom. In the 34, driving east of shaft, the lode is 2½ ft. wide, worth for tin 7s. per fathom. The lode or branch mentioned in our last as being cut in the 24 cross-cut, we are inclined to believe, a split from the main part of the lode, and hope are long to speak of its full discovery southwards.

**WHEAL MARY HUTCHINGS (Plympton).**—Wm. Edwards, Dec. 22: The adit level going east on the copper lode is cleared and secured 30 fms. from No. 1 shaft; I find the lode in the back of this driving to be very large, composed of quartz, prlan, peach, muncie, with spots of rich black and yellow copper; a more promising lode I never saw at the depth. I have set to the men to clear up No. 2 shaft, which I calculate will require a fortnight to reach the level. The ground in the cross-cut going north continues of the same character as last reported.

**WHEAL NORRIS.**—J. Andrews, Dec. 17: We are making good progress in the sinking of Carver's shaft. In the 45 east we are driving by the side of the lode. The new lode in the 35, driving east of the cross-cut, is 3 feet wide, consisting of quartz, peach, prlan, and muncie, producing stones of yellow copper ore. In the 35, driving west of cross-cut, the lode is 3 feet wide, producing stones of ore, and looking very kindly. In the 35, driving east of shaft, the lode is 18 in. wide, but the ground is harder for driving. I have, therefore, suspended the driving of this end, and put the men in the cross-cut again. The tribute pitches are looking much as usual.

**WHEAL POLLARD.**—Wm. C. Cook, Dec. 20: The ground in the engine-shaft is a little less favourable for sinking, owing to the south side being hard, and the north requiring to be timbered, which we find rather troublesome, as the timber is sometimes broken or knocked out of its place by the rocks in blasting.

**WHEAL SIDNEY (Plympton).**—W. Edwards, Dec. 22: We have commenced the rise in the 48 fm. level end west to the level above, which has given good ventilation throughout this part of the mine, and will enable us to prosecute our operations with greater dispatch. There is no change of importance to notice in any of the other parts of the mine.

**WHEAL TREMAYNE.**—R. Williams, J. Williams, Dec. 21: The new engine-shaft is sunk about 9 fms. 3 ft. under the 143 fm. level; the lode in the bottom of the said shaft, is 2 ft. wide, mixed with kilias, spar, and muncie together—low price tin stuff. In the 143 west we have intersected the stockan, which has heaved the lode about 6 ft. north; up to this point the lode yielded low price tin stuff. In the same level east we have cross-cut north 9 ft., and cut Allen's branch, which is small at present, but yielding good stones of tin. The stopes in the back of the same level, east and west of shaft, are worth on an average 3s. per fathom. In the 133 east the engine lode is 15 inches wide, worth 3s. per fathom. In the 123 east, Allen's branch is small and poor. The stopes in the bottom of the same level east, on Allen's branches, are worth on an average 6s. per fathom. In the 113 east the engine lode is small and unproductive. The stopes in the back and bottom of the same level east, on Allen's branches, are worth on an average 12s. per fathom. In the cross-cut, south of the 103 east, there is no change to notice. The stopes in the back of the same level east, on Allen's branches, are worth on an average 10s. per fathom.

**WHEAL UNITY CONSOLS.**—W. H. Reynolds, Dec. 20: The lode in the 70, east of the winze, is yielding good copper ore. The lode in the shaft contains good stones of copper ore, and likely to improve. The pitch working in bottom of the 60, at 4s. 8d. in 11, is looking well, and altogether the prospects are very encouraging.

**WHEAL UNITY.**—John Daw, Samuel Coad, Matthew Rogers, Dec. 19: Tin Lode: The engine-shaft is sunk 9 fathoms below the 110, and the lode is worth 25s. per fathom for the length of the shaft, which is 12 feet; sinking by six men and three boys, at 35s. per fathom. We intend to sink this lift 12 fathoms, and then commence to drive the 122 east and west of the shaft. In about a week from this time we shall commence to sink the incline shaft below the 110; the lode in the shaft is worth 20s. per fathom; to sink by six men. The 110 is driven west of incline shaft 3 fathoms; the lode in the end is worth 15s. per fathom; driving by six men, at 7s. per fathom. Since the last meeting this level has been communicated from the engine-shaft to the incline shaft. The 110 is driven east of engine-shaft 7 fathoms, and to within 8 fathoms of the winze sinking below the 100. We are driving this end on the south part of the lode, as we can drive much faster than on the north part; it is producing tin stuff of low quality; but the north part we consider to be better quality tin stuff; driving by six men, at 10s. per fathom. In the 100 fathom level, and 10 fathoms east of engine-shaft, a winze is sinking in the north part of the lode; down 2 fathoms below the level, and the lode carrying is worth 18s. per fathom; sinking by four men, at 20s. per fathom. The 100 is driven west of incline shaft 50 fathoms; the lode is producing low-quality tin stuff. The object in driving this end is to intersect the great cross-course; the lode in the end is worth 4s. per fathom. The 80 is driven west of incline-shaft 50 fathoms; the lode in the end is worth 10s. per fathom; this level is opening up good tribute ground; driving by four men, at 4s. 10s. per fathom. The 60 is driven east of Gooding's shaft 25 fathoms; the lode is worth 7s. per fathom; driving by two men, at 3s. 10s. per fathom.—Copper Lode: No. 3 shaft is sunk to the 80, and have driven east of shaft 2 fathoms; the lode is 18 inches wide, composed of quartz, muncie, and stones of copper ore, and it is underlying about 2 feet in a fathom north; driving by four men, at 6s. per fathom. The 68 east is looking well, and the new engine-shaft 12 fathoms, and it is not yet intersected any lode worthy of notice; driving by four men, at 4s. 10s. per fathom. The 68 is driven west of new shaft 13 fathoms; the lode in the end is still split into branches, and each is producing a little copper ore; driving by four men, at 5s. per fathom. A winze is sinking below this level, in which the lode is 1 foot wide, producing stones of ore, but not enough to value; sinking by four men, at 4s. per fathom. On the tin lode, in the past three months, we have laid open some good tin ground—in the back of the 100, east of engine-shaft, on the north part of the lode; in the 80, east of Gooding's shaft, and also in the 110, west of engine and incline shaft, and the quality of the stuff has improved. Although we commenced at the last meeting the return for this quarter would be equal to any of the former returns; and this we should have done had it not been for the unforeseen accidents which have occurred—the bursting of one of the boilers at the stamps engine, and the breakage in the stamps. In the first seven weeks we only sold about 25 tons of tin, but in the last six weeks our returns will be about 38 tons of tin, so now we have much pleasure in saying that our prospects never looked better than at present.—North Part, on Copper Lode: In this part the lode has not been so productive as formerly, in consequence of which the returns of copper ore have gradually fallen off, and we will consider the chances in this regard as being in a very unpromising position, especially west, towards the great cross-course, and also in depth. We still recommend the prosecution of this part, although it is working at a loss of about 400s. per quarter.

**YARNER.**—R. Barkell, Dec. 21: North Lode: The lode in the 40 east is again opening out wide, and the splice referred to in my last report is likely to form the main part of the lode. I would remark here that in the level above (the 30) the lode about the same distance from shaft is small, but opened out larger in a few fathoms driving, which we may reasonably expect will be the same as in the 40. The stopes on this lode is yielding from 3 to 4 tons per fm.; lode is 3 ft. wide, with two good walls. The stopes in bottom of the 30, on south lode, is not rich, producing about 2 tons per fm. The stopes in back of the 40, east of shaft, is yielding 2½ tons per fm. No change in the 30 east. The new engine-shaft is being pushed on as fast as possible. The water here is only two small barrels an hour, which is scarcely any hindrance to us. The water-wheel works well, and keeps the water with ease.

**PUMPING APPARATUS FOR MINES.**—An invention has been provisionally specified by Mr. T. Briggs, jun., of Manchester, which consists in the application of two series of pipes for conveying the water from the bottom to the top of the mine. These two series of pipes are connected to the force-pumps in such a manner that the columns of water in each series of pipes are alternately assisting each other in raising the water from the bottom of the mine.

**PACKING AND CARRIAGE OF GUNPOWDER.**—As a remedy for the dangers attending the packing and carriage of gunpowder, Capt. Peacock, of Starcross, Devon, has submitted to the proper authorities a plan, which consists in putting the gunpowder into a twilled calico bag, that has been dipped into a solution of alum, to fill up the pores of the bag when dry, and render it also unflammable. The bag is to have a round bottom, to be of the internal diameter of the barrel, and 3 or 4 in. longer than the barrel; it is to be partly filled before putting into







were all steamers, the sailing vessels having gone into the Humber for shelter from the strong easterly gales. The little business transacted in house coals was at a further rise of 1s. per ton. Hartley's advanced 9d. per ton. Haswell Wallsend, 24s. 6d.; Tunstall Wallsend, 22s. 3d.; Hartley's, 19s.; unsold, nil; 90 ships at sea.

**EXPORTS OF COAL.**—By the Monthly Circular of Messrs. Laird, Liverpool, we learn that the quantity of coal exported during Nov. was 693,167 tons, against 615,528 tons in the corresponding month of 1863, showing an increase of 77,639 tons. The particulars are—From the Northern ports, 318,332 tons; Yorkshire, 31,446 tons; Liverpool, 60,070 tons; Severn ports, 218,153 tons; and Scotch, 65,166 tons. The increase was—Northern ports, 48,611 tons; Yorkshire ports, 10,297 tons; Severn ports, 7870 tons; Scotch ports, 20,595 tons. The decrease was—Liverpool, 9734 tons. Total exports from January to November inclusive, 7,459,534 tons; same period last year, 7,042,748 tons—increased this year, 416,786 tons.

At Truro Ticking, on Thursday, 4650 tons of ore were sold, realising 21,982 18s. 6d. The particulars of the sale were—Average standard, 130s. 8s.; average produce, 5½; average price per ton, 47. 14s. 6d.; quantity of fine copper, 266 tons 13 cwt. The following are the particulars—

Date.	Tons.	Standard.	Produce.	Price per ton.	Per unit.	Ore copper.
Nov. 17.	5111	116	5	45 10	18s. 11d.	479 12
Nov. 24.	3247	123 10	6	47 6	18 1	80 7 6
Dec. 1.	3033	123 10	6	47 6	18 2	81 16 6
Dec. 8.	3144	123 10	7	46 0	18 8	80 6 0
Dec. 22.	4650	130 8	5½	44 6	16 4	81 14 0

Compared with the last sale, and with the corresponding sale of last month, the standard is about stationary.

At the Swansea Ticking, on Tuesday, 1863 tons of copper ore were sold, realising 29,404 9s. The particulars of the sale were—Average standard, 99 13s.; average produce, 18½; average price per ton, 157 15s. 6d.; quantity of fine copper, 337 tons 13 cwt. The following are the particulars of the sales during the past month—

Date.	Tons.	Standard.	Produce.	Price per ton.	Per unit.	Ore copper.
Dec. 6.	1323	100 4	0	17 15	15 6	17s. 5d.
Dec. 20.	1863	99 13	18½	15 6	17 5	87 1 6

Compared with the last sale, the standard shows a downward movement, but the decline is unimportant. Of the 1863 tons sold on Tuesday, 312 tons were British ores, which gave an average produce of 8, and sold at an average standard of 111 19s. 6d.—6 15s. per ton of ore; the remaining 1481 tons were foreign ores, which gave an average produce of 20½, and sold at an average standard of 98 8s. 6d.—18 2s. per ton of ore. There will be no sale on January 3.

At Dolcoath Mine meeting, on Dec. 12, the accounts for September and October showed a credit balance of 2781 12s. 1d. The profit on the two months' working was 2081 12s. 1d. A dividend of 2148 (6d. per share) was declared, and 6332 12s. 1d. carried to credit of next account. Messrs. Pike and Trengoon were appointed auditors, in the place of Messrs. Lanyon and Pearce, deceased. Mr. Vincent and Mr. C. H. Butlin were appointed surveyors of the mine, in the room of Mr. Perrell, retired. Mr. Hutchinson's portion of the practice in the mine is to remain intact. Capt. Chas. Thomas, William Provis, John Tonkin, Josiah Thomas, and John Hawden reported upon the various underground operations.

At Wheal Seton meeting, on Dec. 12, the accounts for September and October showed a credit balance of 2182 15s. 3d. The profit on the two months' working was 1762 16s. A dividend of 1684 (4d. per share) was declared, and 554 15s. 3d. carried to credit of next account. The agents' report, which was of a more satisfactory character than for some time past, stated that the mines are highly productive, and with the levels turn out 101 tons per fathom. They have been discovering over 60 fms. of ore ground per month, but taking away 20 fathoms only, plainly showing that they are making large reserves, and laying the foundation for continued and increased dividends.

At the Great Wheal Vor United meeting, on Wednesday (Mr. G. Noakes, the chairman of the company, in the chair), the accounts made up to the present time showed a credit balance of 6488 16s. 5d. A dividend of 15s. per share was declared, leaving 2077, to be carried forward. Details in another column.

At Clifford Amalgamated Mines meeting, on Monday, the accounts for September and October showed a credit balance of 1821 2s. 5d. The profit on the two months' working was 1708 19s. 8d. A dividend of 1812 10s. (12s. 6d. per share) was declared, and 8 12s. 5d. carried to credit of next account. Capt. John Richards reported upon the various points of operation. The ore sold from the Wheal Clifford, or eastern district, for the two months realised 9155 1s. 9d. The 230 fathom (the deepest) level is worth 20 tons of ore per fathom, and the pitches working throughout this district are producing their usual quantity of ore. From the Consols district, the ore realised 1097 6s. 7d. In the back and bottom of the 60, on Bowden's north lode, the slopes are worth from 12 to 20 tons per fathom. This part is opening up well; although the lode is small, the ore produced is of good quality. From the United Mines district the ore realised 3202 1s. 5d. In Francis's shaft the lode is still holding out every encouragement. The report concludes that "taking this extensive mine generally as a whole, the prospects have never had a better appearance than at present."

At the East Jane Mine meeting, held at the offices, Walbrook, yesterday, the statements of accounts and the agent's report were presented. A call of 3s. 6d. per share was made. A letter was read from the secretary resigning his office, on the ground of other avocations. The resignation was accepted, and the meeting adjourned till the 24th inst.

At North Wheal Basset meeting, on Wednesday (Mr. R. McCallan in the chair), the accounts for Sept. and Oct. showed a debit balance of 567 13s. 2d. The arrears of call were 418 12s. 6d. A call of 3s. per share was made. Capt. Wm. Roberts reported that they expected to sample about 25 tons of copper ore on Dec. 25, and 5 tons of tin in a month hence.

At Wheal Uny meeting, on Wednesday (Mr. P. L. Hinds in the chair), the accounts for the three months ending Oct. showed a debit balance of 1889 17s. 11d. The arrears of call were 257 4s. A call of 5s. per share was made. Capt. Daw, Coade, and Rogers reported upon the various points of operation. They consider that their prospects were never better than at present.

At New Rosewarne Mine meeting, on Tuesday, the accounts for the four months ending September showed a debit balance of 821 3s. 7d. The loss on the four months' working was 396 0s. 5d. A call of 10s. per share was made. Capt. J. Vivian, E. George, Jun., and W. Mitchell reported that they hoped, from present prospects, that their next four months' audit would be better than the present. They have 107 hands employed.

At the South Condurrow Mine meeting, on Tuesday (Mr. Hallett in the chair), the accounts showed a credit balance of 921 5s. 9d. A call of 2s. per share was made. Mr. Edward King was appointed secretary, in the room of Mr. Dunsford, deceased.

At the East Wheal Vor meeting, on Tuesday (Mr. J. Ford in the chair), the accounts showed a cash balance of 9100 10s. in hand, after paying every liability to end of November. The shaft is down nearly 80 fathoms, and at 100 fathoms deep a junction of the old Vor lode with Smith's lode will take place, and rich discoveries are expected. Details in another column.

At the Great Caradon Mine meeting, on Monday (Mr. Mathew in the chair), the accounts showed a debit balance of 987. A call of 2s. per share was made.

At Fedn-an-drea United Mines meeting, on Tuesday (Mr. C. Martin in the chair), the accounts for the five months ending October showed a balance in hand of 2500 0s. 7d. The balance of liabilities over assets was 2569 19s. 10d., and the calls in arrears, 518 10s. 3d. A call of 5s. per share was made. Capt. Tregey, Delbridge, and Thomas reported that they believed that there is every probability of the late improvements not only continuing, but leading to still greater improvements, and that in these mines steady perseverance will ensure successful and profitable mining.

At the North Buller Mine meeting, on Monday (Mr. Alexander in the chair), the accounts showed a credit balance of 1881. A call of 10s. per share was made.

At Wheal Prosper meeting, on Dec. 14, the accounts showed a debit balance of 873 4s. 5d. A call of 20s. per share was made.

At Hawkmoor Mine meeting, on Tuesday (Mr. C. Martin in the chair), the accounts for the seven months ending Nov. showed a debit balance of 491 13s. 6d. The liabilities amounted to 702 6s. 1d., to meet which there are arrears of call 324 19s. 2d.; leaving a debit balance of 377 6s. 11d. A call of 1s. 6d. per share was made. Capt. Joseph Richards reported that as soon as the rise in the back of the 30, east of the eastern engine-shaft, is held with the bottom of the 25 east the men will resume their places at West Hawkmoor, for more speedily pushing on the cross-cut north in search of the other lode, and driving on their course west, when intersected; and, in doing this, he hopes to be able, as heretofore, to meet a large portion of the expenses. He considers that the carrying out of these recommendations will be attended with large, lasting, and profitable results of ore.

At the East Treskerby Mine meeting, on Tuesday (Mr. Emanuel in the chair), the accounts for the five months ending October showed a debit balance of 8 12s. 5d. The arrears of call on the shares sold through the Stannaries Court were written off. The liabilities to Dec. 2 amounted to 854 14s. 3d., to meet which there are arrears of call 814 6s. 8d., leaving a debit balance of 449 7s. 7d. A call of 12s. 6d. per share was made. Capt. John Hancock and Richard Knuckey reported that the mine has not improved so rapidly as was expected; but, looking at the present appearance of the 12 east, and what may be reasonably expected in the 30 east and west, as well as in the 30 north, their prospects can be said to be uncommonly good, and there is every probability that the returns will shortly increase.

At Wheal Prosper (Breaço) meeting, on Dec. 14, the accounts for ten months showed a debit balance of 873 4s. 5d. A call of 20s. per share was made.

At the Central Snaiblack Mine meeting, held at the George Hotel, Shrewsbury, on Monday (Mr. Job Taylor in the chair), the future of the mine was regarded by the shareholders present as encouraging, and they agreed to increase their holdings to the extent asked in the secretary's circular. It was remarked before the meeting separated that very nearly half of the additional shares might be considered as even then subscribed for, and our informant, writing on Thursday, states that shareholders who were absent are responding freely to the request contained in the resolution.

At the Neath and Pelenna Colliery (special) meeting, on Thursday (Mr. Hulse in the chair), it was explained by the Chairman that 960 of the new shares had been applied for, which was a very large proportion out of the 1200 required—indeed, he thought few companies could show such a response to an application on the part of the board. That would give 4800, but 6000 was the minimum amount required to be expended to produce remunerative results. It was necessary that cottages should be erected upon the colliery; and to erect 20 cottages and a manager's house would cost, it was computed, about 2000. But it was also necessary to have a short line of railway for the transit of the coal. By the present tramway they could not get down more than 150 tons per day, which, although a quantity that would, perhaps, more than meet all the expenditure, would leave but little, if any, profit. Therefore, it was very important that there should be increased facilities for the transit of their coal, which, it was considered, would be best effected by converting the present tramway into an locomotive broad-gauge line, or else a narrow-gauge line, from the upper portion of the estate, to

join the Vale of Neath Railway. It was calculated that the expenditure of making the broad-gauge line would be about 2000, and, probably, the narrow-gauge would cost about 3000. In addition to this, they must incur the expenditure of screens, and of repairing the tracks, trams, and of putting up an engine. Therefore, it would be seen that 6000 would not be too much to place the colliery in really an effective working condition. One of the objects of the present meeting was to decide whether the shareholders would authorise the directors to proceed, or otherwise, with the amount already subscribed. He then read letters from several shareholders, in which the writers expressed a willingness to take their *pro rata* proportion of the new shares, providing each shareholder agreed to do the same; while others were desirous to take more than their proportion. He mentioned that since the colliery had been in the hands of the present board, a great deal of time and attention had been bestowed in the opening up of a market for the company's coal, and he was glad to be in a position to state that Mr. Lewis, their new manager, who was a man of considerable ability, and extremely well recommended, had succeeded in opening up a very favourable market for any quantity of their coal in Swansea, which was far better than the Briton Ferry market. As regards the cottages, it was estimated that the rents derived from them would yield an interest of 10 per cent. per annum upon the capital (2000), expended. By the carrying out of the plans proposed they would be able to produce 200 tons per day, which, deducting every expense, including dead charges, and taking the average price of coal at 5s. 6d. per ton, would leave a net profit of nearly 1800, per annum, or 10 per cent. upon the capital, including the increase of 6000,—that was a calculation based upon the latest estimates. After some discussion, resolutions were unanimously passed expressing the entire satisfaction of the meeting with the management of the present board, and their confidence in the goodness and prospects of the colliery, if properly and efficiently worked, and instructing the board to carry on the operations with all possible energy, feeling the assurance that those shareholders who had not already taken their quota of the new shares would do so, and that the whole 6000 would be eventually raised. A vote of thanks to the Chairman and directors, for the manner in which they had conducted the company's affairs, was passed, when the proceedings terminated.

At the St. John del Rey (half-yearly) meeting yesterday (Mr. John Hooton in the chair), the election of Mr. Bonamy Price, as a director, in the room of Mr. Bayworth, deceased, was referred to a ballot, to take place on Dec. 30. Details of the meeting appear in another column.

At the Central American Mining Company meeting, yesterday (Mr. C. Morris in the chair) the report was unanimously adopted, and the services of the late secretary, Mr. John Phillips, handsomely acknowledged. The details will be found in another column.

At the Don Pedro North del Rey Gold Mining Company meeting, to be held on Thursday next, the directors' report and statement of accounts to Sept. 30 will be submitted. The accounts, as audited by Messrs. Quilter, Ball, and Co., show a cash balance (including 2161 6s. 6d. for 509 ota. of gold on hand at Morro de Santa Anna) of 3257 9s. 1d. The gold produced during the year realised 5637 13s. 6d., whilst, on the other side, it appears that there was expended for management, labour, &c., in Brazil, 10,381 4s. 3d.; for gold troop expenses, 4107 17s. 3d.; expenses in England, 1692 1s. and plant, materials, and stores, 5720 1s. 3d. There is an apparent profit on the Morro de Santa Anna mining account of 1877 9s., and on the general profit and loss account of 6079 9s. 9d. Mr. S. J. Wide has been elected a director in the place of Mr. Stevens, resigned. Messrs. Hayman and S. Lloyd Foster retire by rotation, but are eligible for re-election. The auditors also retire, and are eligible. Captain Treloar reports that the quantity of gold produced was from Bowden's Mines, 18,778 ota.; Branco's, 343; Sociedade, 97; Maquina, 18½; and Praia, 671 ota.—19,907½ ota. The conduct of the force generally has been satisfactory; all have co-operated orderly, heartily, and vigorously for the company's good. Capt. Nicholas Roberts reported upon the mining operations, and Mr. Thomas Tucker upon the mechanical work done.

The Brazilian Land and Mining Company annual meeting is called for Wednesday, and will be made special, to confirm the purchase by the directors of the debt due by the National Brazilian Mining Association to the executors of the late Mr. William Hamilton.

BRITISH COPPER COMPANY.—An order was made on Saturday last by the Master of the Rolls to wind-up the British Copper Company (Limited), under the supervision of the Court of Chancery. Mr. H. Threlkeld Edwards, of the firm of Cash and Edwards, the accountants, was appointed liquidator.

We are informed that a petition has been presented by Mr. Pulbrook, Thredneedle-street, to wind-up the General International Agency Company (Limited), and that Mr. Frederick Whitney, of the firm of Messrs. Harding, Pailin, Whitney, and Gibbons, has been appointed by the Court provisional official liquidator, with power to take immediate possession of the company's books and property.

GREAT WHEAL VOR UNITED MINES.—These mines have sold during 1864, 566 tons 4 cwt. 3 qrs. 26 lbs. of tin, which has realised 38,280 3s. 5d.; and there has been divided among the shareholders during that period 14,622 6s. (or 21 9s. 6d. per share). As will be seen by the details of the meeting (which appear in another column), the reserves of ore in the mine have been increased in value during the past quarter by 20,000. The present total value of the reserves, reckoning black tin at 62s. per ton, is estimated at no less than 200,000.

THE COAL EXPORTS OF 1863.—The returns of the Board of Trade, with reference to the export coal trade, afford no information as to what are far too vaguely termed "other countries." We are now enabled to append the following details as to the coal exported last year. The total quantity sent abroad was 8,018,481 tons, of the value of 3,545,174. This total of 8,018,481 tons referred to, it should be observed, to coal pure and simple, not including coke, cinders, &c. The exports of coal to Russia comprised 443,425 tons; Sweden, 211,421 tons; Norway, 116,148 tons; Denmark, 545,121 tons; Prussia, 505,521 tons; Mecklenburg, 46,715 tons; Hanover, 83,107 tons; Oldenburg, 28,587 tons; Hamburg, 489,092 tons; Bremen, 5763 tons; Lubek, 25,492 tons; Holland, 212,158 tons; Belgium, 26,000 tons; France, 1,299,464 tons; Portugal, the Azores, and Madeira, 134,335 tons; Spain and the Canaries, 482,670 tons; Italy—Sardinian States, 272,921 tons; ditto, Naples and Sicily, 158,398 tons; ditto, the Adriatic ports of Ancona and the Romagna, 80,853 tons; the Austrian territories, 72,178 tons; Greece, 27,083 tons; Turkey Proper, 167,819 tons; Egypt, 246,586 tons; Algeria, 21,540 tons; the Cape Verde Islands, 31,397 tons; Java, 29,169 tons; China (exclusive of Hong Kong), 107,219 tons; Cuba, 144,534 tons; St. Thomas, 58,870 tons; United States—North Atlantic ports, 268,277 tons; ditto, South Atlantic ports, 7316 tons; ditto, Pacific ports, 12,497 tons; Brazil, 161,941 tons; Uruguay, 49,026 tons; the Argentine Confederation, 19,755 tons; Chili, 72,288 tons; Peru, 26,320 tons; the Channel Islands, 68,907 tons; Gibraltar, 89,775 tons; Malta, 129,890 tons; the Ionian Islands, 34,438 tons; the British possessions in South Africa, 24,924 tons; the Mauritius, 28,145 tons; Aden, 83,218 tons; India, Singapore, and Ceylon, 342,490 tons; Hong Kong, 50,905 tons; Australia, 34,005 tons; British North America, 195,367 tons; the Bermudas, 26,545 tons; and the British West India Islands and British Guiana, 117,152 tons. Here we see at a glance our coal relations with every quarter of the world, and a wonderful *tableau* it is. However, the great lines of oceanic steamers which British enterprise has established have contributed powerfully to the absorption at remote points of the globe of large quantities of British combustible.

PURCHASE OF A COAL FIELD BY THE FRENCH GOVERNMENT.—The Nation denies that any concession of a coal field is to be made by Prussia to the French Government (as stated in last week's Journal), the negotiation being engaged with the Cabinet of Bavaria, in which country the mines in question are situated. "It is also true (adds that Journal) that France is endeavouring to acquire a naval station on the shore of the North Sea, and Bremerhaven is named a likely place. The whole affair, it should not be forgotten, is of a purely industrial character, and unconnected with any political combination."

TESTIMONIAL TO A COLLIERY OYERMAN.—Some friends connected with Oakenhaw Colliery have presented Mr. John Redhead with a magnificent dinner service, and a gold chain. The articles bore the following inscription:—"Presented to Mr. John Redhead, by the workmen of Oakenhaw Colliery, as a mark of respect." An excellent supper was provided at the Colliery Hotel by Mr. Lamb. After the removal of the cloth the chairman, Mr. W. L. Gott, presented, on behalf of the subscribers, the testimonial. Mr. Redhead has been connected with the colliery during the last seven years as agent for Messrs. Straker and Love. He was removed a few weeks ago from Oakenhaw to Houghall Colliery. The testimonial was purchased of Messrs. Held and Sons, Newcastle-on-Tyne.—*Durham Advertiser*.

PRESIDENTIAL.—A few days ago a deputation from the mining engineers, &c., waited upon Mr. H. Johnson, of Dudley, and presented him with a splendid 16-inch Gravatt level and staffs, of Troughton and Simms' best make, bearing the following inscription:—"This instrument, with a purse, was presented to Mr. Henry Johnson, on Nov. 26, by his brother mine agents of South Staffordshire, as a token of regard and esteem."

COLLIERY ACCIDENT.—At North Seaton Colliery one of the ropes by which the coals and men are drawn to bank, broke, and it was about ten o'clock at night before they could be got out. Upwards of 280 men and boys were at work at the time of the accident, and they could not be brought to bank until a new rope was put upon the drum of the machine.

THE ACCIDENT AT DEVON GREAT CONSOLS.—The miner, Richards, referred to last week as having broken his thigh, is since dead.

THE TIN STANDARD.—The standard for tin is now 141 per ton lower than at the corresponding period of last year, another reduction of 2s. per cwt. having been decided upon by the smelters on Dec. 14. It was considered that this was the minimum likely to be reached, but this opinion has not been confirmed. On the contrary, prices are even more depressed; and we have a still further drop to report to-day. The standard for tin ore was reduced yesterday (Dec. 21) 2s. per cwt. all round, and are now:—Common 89s., superior common 90s.; fine 91s., superior fine 92s. A good deal of Straits has been forced on the market at various prices. English continues exceedingly dull, and a further decline in price is by no means improbable. Cornwall is now not only a tin-producing and exporting county, but an importing one also. Large quantities of tin from London and elsewhere are being brought into the county by the Cornish tin smelters.—*West Briton*.

OIL OR GAS WELLS IN CHINA.—In the districts of Young Hian and of Melanau Hian, in China, there exist a large number of salt-water wells, extending over a space of about six leagues, which are actively explored by the neighbouring population. From the mouth of these wells arise columns of inflammable air, so that if a torch be applied to the opening globes of fire, from 20 to 30 feet high, are seen to arise, shining with a brilliant light. The Chinese are over these sources of gas with long bamboo tubes, and the gas communicated through these tubes serves to illuminate the machines by which the salt wells, and the place where they are situated, are explored.

LEAD ORES.			
Sold on the 16th December.			
Mines.	Tons.	Price per ton.	Purchasers.
Twelve Apostles .....	30	£12 7 6	J. Hughes.
ditto .....	10	6 15 0	ditto
Mina Boundary .....	20	12 15 0	A. Eytan.
Sold on the 21st December.			
Nant-y-lago .....	8½	12 3 6	Newnham, Keates, & Co.
ditto .....	8½	12 3 6	Walker, Parker, & Co.
Sold on the mine.			
Billins .....	10	13 6 6	Walker, Parker, & Co.

SILVER ORE.			
Sold on the 20th December.			
Mines.	Tons.	Price per ton.	Purchasers.
Isle of Man Mining Co. (chats) .....	80	£16 6 0	R. Mitchell & Son.

BLENDE.			
Sold on the 21st December.			
Mines.	Tons.	Price per ton.	Purchasers.
Great Laxey .....	200	£3 11 6	J. H. Attwood.

BLACK TIN.			
Sold on the 16th December.			
Mines.	Tons.	Price per ton.	Purchasers.
Pendean Consols. 3 19 2 7 .....	£27 10 0	£27 14 6	Bolton & Son.
ditto .....	4 16 3 0	£7 10 0	278 3 1—R. Mitchell & Co.
Sold on the 16th December.			
Gl. Wh. Vor Utd. 88 1 22 .....	3580 18 8	—	—
Sold on the 17th December.			
Penhalls .....	7 1 3 24	418 15 10	—
Kitty (St. Agnes) 11 4 3 14 .....	660 11 4	—	—
Sold on the 20th December.			
Wheal Uny .....	89 19 0 16	2944 16 8	—

COPPER ORES.			
Sold on the 20th December.			
Mines.	Tons.	Price per ton.	Purchasers.
Wheal Uny .....	34½	£15 10 8	—

COPPER ORES.			
Sampled November 30, and sold at Swansea December 20.			
Mines.	Tons.	Produce.	Price.
Cobre .....	100	129½	£10 15 0
ditto .....	99	13	10 18 6
ditto .....	98	124½	10 12 6
ditto .....	97	124½	10 16 0
ditto .....	96	124½	10 12 0
ditto .....	95	21½	17 15 0
ditto .....	94	18	15 13 0
Cape Copper .....	55	34½	30 0 6
ditto .....	54	34½	29 12 6
ditto .....	47	34½	30 1 0
ditto .....	46	34½	30 3 0
ditto .....	45	34½	29 18 6
ditto .....	76	24½	21 0 0
ditto .....	45	32½	28 8 0
ditto .....	35	32½	28 8 0
Loose ore .....	4	28½	24 7 6
Cuba ore .....	100	13½	11 18 6

COPPER ORES.							
Sampled November 30, and sold at Swansea December 20.							
Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.

ditto	100	159	210	13	Cuba ore	95	14	213	0
ditto	99	15	10	13	6	Precipitate	15	65	3
ditto	97	15	10	12	6	Iron	88	14	11
ditto	97	15	10	12	6	Stone	47	24	18
ditto	89	134	10	13	6	Precipitate	13	44	8
ditto	86	21	17	15	6	ditto	5	73	60
ditto	83	18	15	13	6	Berhaven	92	9	8
Cape Copper	55	34	30	6	ditto	116	9	8	2
ditto	54	34	29	12	6	Connorree	103	3	2
ditto	47	34	30	1	0	Capagh	40	7	6
ditto	46	34	30	3	0	ditto	10	10	16
ditto	45	34	29	18	6	Irish ore	11	3	2
ditto	42	34	31	0	0	Chili Regulus	8	87	56
ditto	76	34	31	3	6	Newfoundland	2	16	13
ditto	35	33	28	8	6	Oxide	2	49	4
ditto	35	33	28	8	6	Copper sludge	2	25	16
Loose ore	4	28	24	7	6	Copper ore	3	18	1
Cuba ore	100	13	11	6	6				

NO SALE January 3, 18
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## WATSON AND CUELL'S MINING CIRCULAR.

WATSON AND CUELL,  
MINING AGENTS, STOCK AND SHARE DEALERS, &c.  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Messrs. WATSON and CUELL having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special reports and remarks upon Mines and Mining, and the state of the Share Market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. Watson, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium published in 1843 Mr. Watson was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. Watson and Cuell have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share-dealing than there is at present; and, from the lengthened experience of Messrs. Watson and Cuell, they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON and CUELL transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt, and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON and CUELL also inform their clients and the public, that they transact business in the public funds, railways, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON and CUELL are almost daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON and CUELL having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are enabled to supply shares in all the best mines at close market prices, free of all charges for commission.

**EAST GRENVILLE, AND ITS PROS AND CONS.**—Mr. Abraham James says, that in our remarks upon his opinion of East Grenville, in the Journal of Dec. 10, we "insinuated and attributed to him motives unworthy of any honest man."—2. "If we could disprove or gainsay a single statement that he made, he would not have troubled the Journal with the following remarks." The meaning of this phrase is not quite clear, but let it pass.—3. He asks, "If Capt. Charles Thomas's report was so favourable, why did he not publish it for the good of the public?"—4. He asks "the reason we can give for asserting that the ore dips west from East Grenville into Grenville?"

In the first place, we should be very sorry to accuse anyone of "motives unworthy an honest man,"—and let us see what we really did say. It was simply this, "that while Captain Charles Thomas was the first and most honest practical miner of the day, Mr. James, who was doing all he could to injure the property, was a jobber in shares." Does Mr. James attempt, in his letter, to deny, or even dispute, the accuracy of this? Not in the slightest degree; but he enters into the rambling statements which we have numbered as above, and which we will now pass under review. In the Journal of Nov. 26, Mr. James wrote a letter, denying the correctness of the report of the agents of the mine, in reference to the 75 fathom level, and said he was a "practical man, with twenty-five years' experience," and that he asserted "with some of the most respectable mine agents in Cornwall, his opinion that the ore driven through in the 65 fm. level would not last down to the 75, in consequence of there being such a manifest difference in the character of the lode and rock in the two levels." Now on reading this, we imagined, and doubtless so did many of the readers of the Journal, that Mr. James was a practical mine agent; but we were soon afterwards informed that he had never been agent of a mine—that he was a share jobber in the Redruth and London markets—that he was in daily communication with the "bears," and that he was a heavy "bear" himself; indeed, he was said to have sold in the counting-house of the mine shares (that he did not possess), at a low price for delivery at the end of the year, and this in presence of the agents, the accuracy of whose reports he, in the first place, attempted to impugn. He was also stated to have said, in the presence of a shareholder in Cornwall, that he would "continue to write against the mine as long as he could hold a pen." If these statements are untrue, and Mr. A. James will positively deny them, we will express our regret at calling him a "jobber in shares;" if, on the other hand, they are true, and both the shareholder referred to and the agents of the mine will confirm most of them, will any reader of the Journal say that our remarks were uncalled for, holding, as we did, and do, with our friends, a large interest in the mine? Having said thus much of Mr. James, we refer next to the query he asks—If Capt. C. Thomas's report was so favourable, why did he not publish it? We reply, the inspection was not made for us, nor by our authority, and we were not authorised to publish the report; but, if reference is made to the City Article of the *Mining Journal* of Dec. 3, an extract of Capt. C. Thomas's report will be found, wherein he says—"The lode in the 75, from the shaft to the end, is quite equal to that in the 65; in the last 3 ft. the lode has undergone a favourable change." This being in direct contradiction to the opinion of Mr. A. James and some of the "most respectable agents," whose names he did not give. Next, in reference to the dip of the ore, Mr. James says—"What reason can we give for asserting that the ore dips west?" Our own reasons have been several times given, and we now quote further from Capt. C. Thomas (see same article in the *Mining Journal*)—"I think, too, that there is a western dip of the ore ground from the 65 downwards, and, judging from the line or bearing of the lode in the 65, where the best course of ore was driven through, I expect the same favourable bearing will shortly be met with in the 75." He also said, in the report, "If elvan is met with in the 75, as was found near the best ore in the 65, a good lode may be confidently hoped for." Well, elvan has now come into the 75, as it did in the 65; and as it would, probably, have done before but for the westerly dip; and now that a course of ore is most likely near at hand, the "practical man of 25 years" changes his ground, and says in his last letter, "It is my opinion if a good lode of ore be met with in the 75 it will be quite independent of what has been driven through in the 65." It will certainly be in a different level, and so far Mr. James is right; and we may add, in reference to the dip of the ore, that this person himself stated, in the office of the company, only a very short time ago, and when the agents were undecided whether it was westerly or not, that his own opinion was that the ore did dip west! So much for Abraham James.

**THE PROGRESS OF MINING IN 1864.—THE TWENTY-FIRST ANNUAL REVIEW,** BY J. Y. WATSON, F.G.S.—Although it is not Mr. Watson's intention to enter into any elaborate review this year, nor to publish the usual pamphlet, we shall endeavour to give in this place a slight review of the year, noticing the Chiverton and other districts, and advertising to the causes that have been mainly instrumental in causing such disappointment to the public in mines brought out at high premiums; as well as the losses in the old. We shall be glad, therefore, to receive as usual any particulars that pursers and officials may favour us with.

**CHRISTMAS.**—In wishing a merry Christmas to "One and All," we would observe that, as it is to be a holiday on the Exchanges from Friday till Tuesday, correspondents will not feel disappointed if their communications remain unanswered for a day or two.

**DOLCOATH MINE.**—In examining the reports of this mine for the last five accounts I had the curiosity to cast up the value of all the ends and winzes. The following are the dates, with the aggregate value respectively:—April 11, 1864, £214; June 12, 1864, £376; Aug. 5, 1864, £491; Oct. 10, 1864, £624. The last report being more than 200% per fm. higher than at any other period in 1864. The price of tin during the last two months has been 11. 12s. 6d. less than for the corresponding period to the last account.—*Cornwall Gazette.*

## THE NORWEGIAN TITANIC IRON COMPANY (LIMITED).

The above company beg to CALL the ATTENTION of IRONMASTERS and STEEL MANUFACTURERS to the IMPORTANT RESULTS that are to be OBTAINED by the USE of THEIR ORES in ADMIXTURE with ORDINARY IRON ORES. It has been proved by the experience of ironmasters, extending over a considerable time, that even a small proportion of the Norwegian ore has a most beneficial effect on the quality of the pig, and that it increases its strength considerably, the pig when puddled making iron of a very superior quality, and of a steady nature.

The above ores when mixed with the hematites make a pig specially adapted for the Bessemer process.

The great utility of these ores for puddling has been fully established at several of the large ironworks in the North of England; they are far more durable than bull dog, magnetic oxide of iron, red ore, calcined ironstone, or any other material that has hitherto been introduced. Besides the peculiar property the Norwegian ores have of resisting great heat and fluxing action, they materially improve the quality of puddled bar.

The directors having purchased extensive deposits of the ore in Norway, and constructed a railway to facilitate its regular supply, are now preparing to import it on a scale.

The ore can be supplied with varying proportions of iron and titanium, some containing 54 per cent. of metallic iron, and 10 to 12 per cent. of metallic titanium, others containing less iron and more titanium.

The great feature in these ores is the entire freedom from the impurities found in ordinary iron ores—viz., sulphur, phosphorus, &c., and from their containing the metals titanium and vanadium, which are found in Swedish and Russian iron of the best brands; they are peculiarly fitted for the manufacture of superior descriptions of iron and steel, and for improving the quality of inferior brands.

Applications to be made at the office of the company, 4, Park-place, Leeds.

## THE VICTORIA SLATE COMPANY (LIMITED).

Prospectuses and every information can be had from the hon. secretary, at the office of the company, Leinster Chambers, 43, Dame-street, Dublin. Specimens of the slates can be seen at the office, also at the Exhibition, Kildare-street. The quarries are situated near Carrick-on-Suir, and Waterford.

## THE MARRINGTON "CANADA" MINING COMPANY (LIMITED).

Incorporated in Canada by an Act of the Canadian Legislature (27th Victoria, 8th Part.), and registered in the United Kingdom under the Companies Act, 1862, whereby the liability of the shareholders is strictly limited, both in Canada and here, to the amount of their shares.

Capital, £75,000, in 15,000 shares of £5 each. Of the 15,000 shares about two-thirds are already disposed of; one-third only remain for allotment.

Deposit on application, 10s. per share; and on allotment, 25s. per share. No call to exceed 2s. 6d. per share, or to be made at less intervals than six months. Applicants not receiving any allotment will have their deposits returned, without deduction or delay.

**DIRECTORS.**  
Right Hon. the LORD AYLMER, Melbourne, Canada East.  
ALEXANDER BOYLE, Esq., Banker, College-green, Dublin.  
ROBERT ORR, Esq., Banker, College-green, Dublin.  
CHARLES E. BAGO, Esq., Upper Leeson-street, Dublin.  
WILLIAM FOOT, Esq., Rutland-square, Dublin.  
EDWARD FOTRELL, Esq., J.P., Harcourt-street, Dublin.  
WILLIAM JOURNEAUX, Esq., Merchant, Dublin.  
GILBERT SANDERS, Esq., Dublin.  
EDWARD WRIGHT, Esq., Fionaville, Eglington-road, Dublin.

**BANKERS.**  
The European Bank (Limited), 83, King William-street, London; 3, College-green, Dublin; and their agents in Canada.  
Messrs. Henry Chapman and Co., Bankers, Montreal.

**BROKERS.**  
James Pim, Esq., 5, Copthall-court, Throgmorton-street, London, E.C.  
Messrs. Smyth and Du Bédat, 11, College-green, and  
Messrs. McMahon and Fallon, 27, College-green, Dublin.  
**SOLICITORS.**—Messrs. Courtenay and Archer, Leinster Chambers, Dame-street, Dublin.  
Gilbert Sanders, Esq., Hon. Secretary (pro tem.).

**OFFICE.**—47, DAME-STREET, DUBLIN.  
This company was formed for the purpose of working the Marrington and Balth Copper Mines in Lower Canada, of which full reports and particulars are set forth in the prospectus; copies of which, with forms of application for shares, may be had from any of the brokers, or at the office of the company, 47, Dame-street, Dublin.

## SWANSEA COPPER ORE WHARVES.

TO IMPORTERS OF FOREIGN COPPER, LEAD, AND CALAMINE ORE.

GENTLEMEN.—We beg to inform you that, in consequence of the retirement of Messrs. W. and J. M. Williams from the copper ore trade, which they have carried on here for so many years past, we have resolved to enter upon that business, and for which purpose we have secured most eligible wharves, on the west side of the North Flood, where vessels drawing 20 ft. of water can get alongside at all times. These wharves are now covered in, the floors being made of concrete to prevent waste of the ore. A powerful steam crusher has lately been erected on the premises, and is now in working order.

The business we propose carrying on is that of COPPER ORE WHARFING, combined with metal and other general agencies, which will be managed by our Mr. Thomas Elford, who for 20 years has filled an important situation under Messrs. Williams, Foster, and Co., and for the last eight years has had the entire management of their large copper smelting works, and copper and metal rolling mills, in this locality, as well as the copper ore business of Messrs. W. and J. M. Williams, which we trust will be a sufficient guarantee to our friends that any business they may entrust to our care will be conducted with the most scrupulous attention to secure the best results for their interests.

In consequence of the large number of very extensive Copper smelting works concentrated in this immediate locality, this market affords greater competition for ore than perhaps any other in the world, there being now no less than sixteen distinct Companies competing for ore sold at the public ticketing, every two or three weeks. There is also a good demand for lead and zinc, or calamine ores, several large lead and spelter works having been established in this district for some time past, and new ones are in course of erection.

Soliciting a share of your consignments of ore, regulus, and slab copper to this port, as well as a share of any general business you may have to transact in this quarter, We remain, Gentlemen, your obedient servants.

**ELFORD, WILLIAMS, AND CO.**  
Messrs. Williams, Foster, and Co., London and Liverpool; Messrs. Williams, Harvey, and Co., London and Liverpool; the Glamorganshire Banking Company, Swansea; Messrs. Alex. Bell and Sons, No. 8, Finch-lane, London; Mons. Armand de Lacombe, Madrid.

## PROPOSED RAILWAYS IN LONDON AND TEN MILES ROUND.

This day is published, price in sheet 2s. 6d., mounted in case 4s. 6d., a MAP OF PROPOSED RAILWAYS AND MISCELLANEOUS IMPROVEMENTS.  
Deposited at the Private Bill Office, November 30, 1864, for Session 1865.  
Also, the Railways in Operation, Constructing, and Sanctioned.  
London: Edward Stanford, 4, Charing-cross, S.W., and all booksellers.

Will be published in the first week of January.

## RAILWAY REFORM: ITS IMPORTANCE AND PRACTICABILITY CONSIDERED AS AFFECTING THE NATION, THE SHAREHOLDERS, AND THE GOVERNMENT, WITH A COPIOUS APPENDIX, CONTAINING—

I.—A Popular History of the Rise, Progress, and Contemplated Completion of our Railway System.  
II.—The Financial and Statistical History of the Railways of the United Kingdom.  
III.—The Railway Reform Bill.  
IV.—Mr. Gladstone's Speech on Introducing the Bill in the House of Commons, 8th July, 1864.

V.—The Position and Prospects of the Thirteen Great Companies.  
VI.—The Position and Prospects of the Twenty Lesser Companies.  
VII.—The roads of a country, from the very nature of things, are public concerns; they are as necessary to a people as the air they breathe."—Second Report of the Select Committee of the House of Commons, 1846.

"Should we live to see fully developed all the powers and energies of this system, so shall we also live to see it recognised as one of the greatest benefits that either art or philosophy has conferred on mankind."—Quarterly Review.

"If I entertained any feeling on the subject of the interference of the Government, it is one of regret that they did not in the first instance take a more active and prominent part; that they did not throw their weight in aid of the measures which appeared to them the best general scheme for accommodating the traffic throughout the metropolis, without having the slightest reference to this company or that."—Speech of the Earl of Derby in the House of Lords, 12th February, 1864.

London: Longman, Green, Longman, Roberts, and Green, Paternoster-row.

## CHEMICAL TECHNOLOGY,

By RICHARDSON AND WATTS.  
Containing Sulphuric Acid, Salt, Chlorine, Soda, Potash, Soap, Grease, &c., their Manufacture and Applications. Vol. I., Part III., 800 pages, 8vo., with 400 woodcuts, £1 13s. Vol. I., Part IV., containing Aluminium, Sodium, Soda, Potash, Artificial Stone, Phosphorus, Lucifer Matches, Hyposulphite of Soda, Borax, Mineral Waters, Saltpetre, Nitric Acid, Gunpowder, Gun-Cotton, Fireworks, their Manufacture and Applications. 8vo., 600 pages, with woodcuts, £1 1s.

**GANOT'S TREATISE ON PHYSICS, EXPERIMENTAL AND APPLIED.** By E. ATKINSON, Royal Military College, Sandhurst. Post 8vo., illustrated with 600 woodcuts, 12s. 6d.

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Now ready, price 3s. 6d., by post 3s. 9d. per penny stamps.

**M. R. HOPTON'S NEW WORK,** entitled CONVERSATIONS ON MINES, &c., BETWEEN "A FATHER AND SON." Thirteen plans on ventilation and working out coal, dialling, planning, and taking the dip and rise of the mine illustrated.

Near 900 copies are ordered in Wigan alone.  
Address Mr. J. J. CAMPBELL, Cropper's-bill, St. Helen's; or the author, 73, Peter-street, St. Helen's.

## Notices to Correspondents.

**FUND FOR THE RELIEF OF MINERS.**—I am obliged by your insertion of my communication in your valuable Journal of last week. I omitted to say that the allowance in case of sickness is calculated at 11. per month. For your next publication, I hope to send you a form of the Rules for this Fund.—R. H. W.

**ABERHAM IRONWORKS.**—Having taken shares in this company through the advertisements which appeared in the *Mining Journal*, I am induced to ask through the same channel if the company is still in existence, and, if so, when they contemplate taking possession of the works? A circular issued Sept. 27, making a call of 5s. per share, stated that it would give them possession. Has not that call been met by the shareholders, or is the fault with the executive?—A CONSTANT SUBSCRIBER.

**ABERHAM IRONWORKS.**—I have felt much surprise, in common with many others interested in mining, that no answer has been given to the very pertinent and important questions which have appeared in the *Mining Journal* regarding the Aberham Ironworks. The public have a right to know how this undertaking is conducted. They would like to be better assured than they are that the local management is what it ought to be; that skill, economy, and energy are put forth, and that the character, intellectually and industrially, of the persons employed on the works is such as to give fair prospects of success, and that nothing in the likeness of nepotism has crept into this department.—Q.

**EAST WHEAL ABRAHAM.**—Will any correspondent residing in the locality favour me with some particulars as to the working and management of this property? I am informed that they have cleared out the adit level, and found the lode to be small and poor, squeezed up between two granite rocks. Is this so? The charges for officials, I am also informed, are unusually heavy.—A SHAREHOLDER.

**THE LEAD MINES.**—"T. H." (Pembrey).—A complete list of the names and addresses of the lead mines of the kingdom is given in the "Mineral Statistics," compiled at the Royal School of Mines, by Robert Hunt, F.R.S., the Keeper of Mining Records. The price of the book is 2s. 6d., or it can be forwarded through the post on receipt of 2s. 10d.

**LEAWOOD (late Wheel Fanny).**—This mine, some years since worked under the management of Mr. Josiah Hitchins, was stopped for want of efficient machinery. It was always considered a promising piece of mineral ground, with as fine a gooson back as can be seen at Devon Great Consols. There is a 60-in. engine erected, which has been to work up to the present time. Its progress has been very slow, and it is feared if larger pumps are not put in Leawood it will share the same fate as Wheel Fanny. My advice is to put an experienced agent there, one who is well up to pump-work, to save the heavy expenditure now going on without results; or if Capt. Williams, of Wheel Friendship, were called in, no doubt, knowing the large quantity of water to contend with, his advice would be valuable. If this mine is well managed, and with economy, there is little doubt but that it will be a good mine.—OBSERVER.

**SOUTH BEDFORD.**—Under the column, in last week's Journal, headed "Mining Notabilia," is a paragraph, signed "Miner," in which the public is informed of the wonder created in his mind by reason of a steam-engine which he has discovered on the sett remaining unused. As neither the captain nor myself know anything about steam-engine on the sett, no doubt "Miner" will kindly communicate to us its whereabouts. The sett is rather heavily timbered, which may account for the said steam-engine having escaped our notice; and perhaps "Miner" will accept this as a reason why we do not know "who ordered it, or by whose authority it was erected."—W. G. GARD.

**MAUDLIN.**—There is a great deal now said about these mines and the wonderful riches discovered, and further riches likely to be discovered, according to the opinion of some. But how is it that there are so many shares advertised for sale by several brokers at what must be a very low price if the mine is such a rich one now and for the future? Who are the directors, and is the company limited? I observe the same mine in the Journal of Jan. 12 last, now just 12 months since, as 4s. per share then paid, while in last week's Journal it stands at 4s. 2s. only paid. What does this mean? How have the costs been paid for the last 12 months?—VIATOR.

**WHO IS TO BLAME?**—RESPIRYN COPPER MINING COMPANY (Limited).—In Sept., 1860, I applied for 10 shares in this company, having paid a deposit of 10s. per share to the City Bank. On Oct. 4, 1861, I received a letter from the manager stating that the "vendors of the Respiryn Mining sett having failed to make a good title thereto, the directors cannot, of course, proceed any further in the matter, and steps will be taken immediately for the return, in full, of the deposits paid for shares." From that day to the present I have been unable to obtain the return of my deposit, although I have written to the manager several times, but without receiving any answer.—C. J. D. I.

**ENFOR'S SYSTEM OF GEOLOGY.**—"R. W." (Liskeard).—We by no means intended to imply "that any amount of abuse and insult emanating from Mr. Ennor is to be published simply because he is an ignorant man;" and we agree that the force and value of his letters might be greater, and productive of more credit to himself, if they were confined to the expression of his own views, without the condemnation of everything else; but "R. W." must well know that Cornishmen are by nature inclined to have their own way, and that the only means to induce them to make known whatever useful they may have discovered is, in a manner, to pander to their weakness—the undying desire to condemn "foreigners"—and secure the grain that is to be found among the chaff. If a writer declines to have his corn winnowed, he must himself risk whether his readers will swallow the chaff with it or leave the whole untouched. We court the communications of "R. W.," who, being himself a thoroughly practical miner, cannot have failed to make observations which are worthy of being placed on record, and must be well able to point out wherein his experience differs from that of Mr. Nicholas Ennor.

**ENFOR'S SYSTEM OF GEOLOGY.**—We freely admit the accuracy of "A Bristol Reader's" assertion that he "neither ventured on a discussion of the subject or raised any argument," and that he referred to the style of writing only. It is gratifying to find that "A Bristol Reader" agrees so far with us as to the value of some of the statements published, and although we admit that the style of Mr. Ennor's writing may not be calculated to induce anyone to show him where he is at fault, there can be no doubt that "men of reputation and eminence" will avail themselves of his facts, and thus be enabled to modify many of the theories they have previously taught as orthodox. "A Bristol Reader" states that the principal reason for his second letter "is to clear the Mining School and its members from any knowledge of or complicity in this business," and that he considers Mr. Handel Cosham "would make a good fight with the author of the 21 letters, if they had a fair stage and no favour," say in the columns of the *Mining Journal*. With respect to this, we can only inform him every facility for the expression of his views, and promise him the utmost impartiality he can possibly desire. We acknowledge that practical men's theories are seldom worth much, but great general good results from encouraging them to record the observations they have made, as it is upon actual observation alone that the man of science can lay down any reliable theory for the miner to work upon. Were every mine agent to publish his observations as freely as Mr. Ennor has done, fallacious doctrines would be no longer taught, and all connected with the development of our mineral wealth would be very largely benefited.

The papers on "The Slate Trade as an Investment" will be resumed in next week's *Journal*—Dr. Percy's Lectures, and the Early Railway Engineers, will also appear.

THE MINING JOURNAL  
Railway and Commercial Gazette.

LONDON, DECEMBER 24, 1864.

After a very careful examination of the REPORT of the COMMISSIONERS OF MINES, of the EPILOGUE OF EVIDENCE, and of the APPENDIX which accompanies it, we are bound to declare that we are but very imperfectly satisfied with the result. No one can examine the mass of evidence which has been accumulated, or read the elaborate reports which are given in the Appendix, without admitting that these Blue Books contain the most important facts which have ever been accumulated in relation to metalliferous mines and miners. But the report of the Commissioners themselves bears such unmistakable evidence of the feeling of uncertainty which possessed the minds of the writers, that it will, we fear, on this account, fail to produce any impression. In reading this, we feel that, either men with a very imperfect knowledge of metalliferous mining—that is, of the subterranean exploration of a nearly vertical lode—have written it, or that the report has been rendered obscure and weak through the want of unanimity amongst those who have signed it. The Commission at first consisted of Lord KINNAIRD, the Hon. ALGERNON FULK EGERTON, M.P., NICHOLAS KENDALL, M.P., HENRY AUSTIN BRUCE, M.P., JOHN ST. AUBYN, M.P., EDWARD HEADLAM GREENHOW, M.D., PHILIP HENRY HOLLAND, RICHARD DAVEY, M.P., with Mr. TEMPLE as the secretary. When more than half the work was done Sir PHILIP DE MALPAS GREY EGERTON, M.P., and the Hon. F. LEVISON GOWER, M.P., took the seats in the Commission which were vacated by the Hon. Mr. FULK EGERTON and Mr. H. A. BRUCE, and for Mr. TEMPLE, as secretary, was substituted Mr. T. F. CAMPBELL, of Isleay. These changes were, to say the least of them, unfortunate, as introducing men who had no knowledge of mining, after the really most important districts had been visited, and when, consequently, they could not familiarise themselves with all the facts. Every one who has watched, as we have done, the progress of the enquiry, will bear witness to the earnestness of Lord KINNAIRD as Chairman of the Commission. He has toiled with an anxious desire to arrive at the truth in every case, and he has taxed himself heavily in his exertions to reach the causes which are actively injurious to the labouring miner. We have no desire to exalt his lordship above the gentlemen who laboured with him, but we have felt at various times a conviction, that Lord KINNAIRD was placed in the position of a judge, with advocates on either side of him. On wading, with really laborious industry, through the evidence, the conviction becomes stronger, that one section of the Commission ever desired to make out the darkest case, while another division showed great anxiety to prove that things were not really so bad as they had been suspected to be—especially in one important mining county. We have heard something of the difficulties which were occasionally found to stand in the way of the truth; and in the weakness of the report we have sufficient proof of timidity and imperfect knowledge, to convince us that it has been the result of compromise and doubt.

If the evidence had been recorded as it was given it would have been much more satisfactory than it now is. The method of epitomising the evidence is in every way unsatisfactory, and, after all, it leaves us in doubt



as to the real opinion of the man under examination. What, for example, can we make of the following question and replies? Mr. W. PETHERICK is giving evidence:—

5562. (Mr. KENDALL).—In those cases the men, I suppose, suffered?—Yes, some little; sometimes it was owing to the stuff not being taken away.

We should have been glad to learn what "those cases" were. Capt. T. TRAHER is made to give this valuable bit of information:—

7021. (Mr. KENDALL).—From your experience amongst miners, and their mode of proceeding, do you think that a great deal of their illness arises from want of care?—A very great deal of it. I certainly do think so, and I am candid about it.

Mr. JAMES BARKELL is examined:—

951. (Mr. KENDALL).—Have you ever heard from them any complaint as to their health being affected by the nature of their work?—No.

We presume miners are meant by "them" and "their," but we are left to infer this. Mr. RICHARD PASCOE is questioned.

1769. (CHAIRMAN).—At what age did they die?—At about thirty or forty; they have killed themselves in that time.

Who are "they" who have committed suicide?

In giving us bits of evidence of this kind, the value which should have been attached to a large and most serious enquiry is almost entirely lost; and, worse still, it gives room for the suspicion that much of the evidence which has been withheld might materially alter the case.

We do not desire to deal with this report in any captious spirit. We know how difficult it is to obtain correct evidence of the kind sought, especially when, in some cases, it is felt that the truth must be opposed to self-interest; when, in others, it is feared that it will be so; and when, again, in other cases, it will tend to convict the witness or his employers of either wilful neglect or ignorance. The evidence, however, which is given, although published in so objectionable a form, proves that, in the main, there was a strong desire to put the Commissioners in possession of the truth, as far as each man's experience went. From this we gather a complete confirmation of the views long entertained, that the metalliferous miners, as a body, suffer in health. It is not merely the men who work in the deep mines of Cornwall who die young; those who labour in the shallow mines of Cumberland are equally subject to those diseases which ensure an early death. In obtaining this knowledge, the Commission has been of great service; and everyone who has the welfare of a most industrious class of men at heart will feel glad that HER MAJESTY organised it "to enquire into the condition of all mines in Great Britain." This Commission was directed "to suggest the most practicable means of improving the health and safety of persons employed in such mines." We cannot but think that in this they have failed. They give us, it is true, six resolutions, bearing somewhat on HER MAJESTY's directions, and these are accompanied by some fourteen suggestions. Of these suggestions, some of them have been already acted upon, or are being adopted as speedily as it is possible to introduce them into the mines; others are of an unimportant character, and have really but slight relation to the question; while some points, that are of the most vital nature, are dealt with in words the meaning of which is obscure, or are the subjects of recommendations which are not practical in metalliferous mines.

It is our purpose to examine each of those positions, assuring the Commissioners and the public that our desire is to witness such improvements in the working of our mines as will materially improve the health of the miner, and, consequently, advance the interests of legitimate mining, by securing matured experience to carry forward and direct involved operations.

#### PIG-IRON CONTRACTS—LONG AND SHORT WEIGHT.

A case of considerable interest to the iron trade was heard before Lord Chief Justice Erle and a special jury, in the Court of Common Pleas, on Wednesday. Mr. Kingsford, iron merchant, of Leadenhall-street, brought an action against the Great Western Railway to recover an alleged deficiency in a delivery of pig-iron. Mr. Kingsford had made advances on iron to Mr. Sewell, a merchant, in Nicholas-lane, who stopped payment in July, 1863. At that time the plaintiff had an order from Mr. Sewell to deliver to him 250 tons of the Old Park Company's iron, which was lying at Wolverhampton. After some dispute 250 tons imperial measure were delivered, but the plaintiff contended that, according to the usage in the iron trade, he was entitled to tons weighing 2400 lbs. each, instead of 2240 lbs.; and the present action was to recover the quantity of iron which represented the difference between the two weights. The jury, without even hearing the case to the end, found a verdict for the defendants; and, with reference thereto, Mr. G. Bailey Toms, of Laurence Pountney Hill, under date Dec. 21, writes—

The decision in the Common Pleas, at Guildhall, to-day should result in the abandonment of the custom of dealing in pig-iron in Staffordshire by the ton of 2400 lbs., which is thereby declared to be contrary to the statute, any contrary usage notwithstanding; and it seems now doubtful whether contracts for iron can be enforced in respect of a delivery of more than 2240 lbs. to the ton anywhere in this realm of England, unless a greater weight be distinctly stipulated; at least, so it must be inferred from the verdict so promptly found by the jury for the defendants in the above case.

The Old Park Iron Company were alleged to be the substantial defendants, as well as the original sellers of the 250 tons of pig-iron to one Mr. Sewell, a bankrupt, who hypothesized it to Mr. Kingsford, the plaintiff in the action, and he, on his part, claimed delivery of long-weight from the railway company, according to custom.

Mr. Spencer, of Old Park Works, as witness for the defence, maintained that while he was in the habit of selling iron in Staffordshire by long-weight, his London sales were invariably by short-weight; also that, acting *ex consilio* of Baron Alderson, in 1853, under similar circumstances, his contracts have ever since expressed in either case, respectively, not tons, but lots of 2240 lbs. or 2400 lbs., according as the destination of the iron might be Staffordshire or London.

This is rather an important point to the iron trade, for if contracts which are now made daily and tacitly in Staffordshire for pig-iron, by long weight, should prove, *ipso facto*, legally void as regards deliveries of more than 2240 lbs. avoidable, then it is absurd to continue the local custom of dealing in a non-imperial measure of weight, and the application of a little common sense should secure its early doom there.

Throughout every other part of the kingdom, iron, both raw and manufactured, is sold at per ton of 2240 lbs. weight, according to the statute, without any distinct definition in the contracts.

Having been called to-day by the plaintiff (without any knowledge of the merits) to give my evidence as to the prevalence of the contrary custom in Staffordshire—that of buying Cleveland pig-iron by long-weight—I shall be obliged by your allowing me to state in your columns that in all future contracts the standard of 2240 lbs. to the ton will be exclusively adhered to by my firm; and I think all the ironmasters of the northern districts, after this decision in Court, and the ventilation of the matter, are likely to do the same, and so express themselves in wording their said notes. Meanwhile the Staffordshire practice should become obsolete.

**THIN SHEET IRON.**—A recent American mail brought over a letter, addressed to the *Birmingham Journal*, written on iron rolled so thin that the sheet is only twice the weight of a similar sheet of ordinary note paper—the letter stating that as the plate 13½-in. thick rolled in September by Messrs. John Brown and Co., of the Atlas Works, Sheffield, was probably the thickest ever rolled, the writer sent this specimen, manufactured at the Sligo Ironworks, Pittsburgh, U.S., as the thinnest. The iron was said to be of exceedingly fine quality, and tested by one of Holtzappel's gauges, the thickness of the sheet is found to be the 1000th part of an inch. A sheet of Belgian iron, supposed hitherto to be the thinnest yet rolled, is the 666th part of an inch thick, and the thickness of an ordinary sheet of note paper is about the 400th part of an inch. The statement that an American iron manufacturer had succeeded in exceeding us in the manufacture of thin iron, has naturally led to attempts in this country to ascertain the thinness to which British iron can be rolled, and during the past week Messrs. Murrall and Stothert, the metal brokers of Cardiff, have submitted to us some sheets, which, it is claimed, surpass the American specimens both in quality and thinness. The plates are less than the 1000th part of an inch in thickness, and a plate 8 in. by 5½ in. weighs 2 dwts. 14½ grs. only, those shown us being without the slightest flaw either at the edges or elsewhere. They are manufactured by Messrs. T. W. Booker and Co., of the Melingriffith Works, near Cardiff, and are one-tenth thinner and lighter than the American plates to which such great consideration has been given. We are promised samples of puddle wire-rod and fencing wire from the same works, and are assured that it will surpass that of most other makers. A specimen of the thin sheet may be seen at our office.

**THE FALLACY OF THE IGNEOUS THEORY.**—At the Manchester Geological Society, on Tuesday, Mr. G. C. Greenwell read a paper, by Mr. J. Taylor on "The Pliocene and Post-Pliocene Deposits in the neighbourhood of Norwich." The paper showed that there was a considerable difference between the drift in the neighbourhood of Norwich and the drift near Manchester, where the character of some of the fossils appeared to be more arctic. Mr. Binney said that he did not think the fossils alluded to in the neighbourhood of Manchester were of so arctic a character as appeared to be generally supposed. Mr. J. Dickinson said that in some respects the paper confirmed views he had previously expressed to that Society, and which led him to think that great changes would shortly take place in the minds of the most eminent geologists on important matters connected with the science. Sir Charles Lyell, at the recent meeting of the British Association, which was held at Bath, withdrew the view that granite was of igneous origin, and said that the views usually taken by geologists that granite and the whole of the metamorphic rocks were of igneous origin required reconsideration. Some important expressions, coming from so eminent a man as Sir Charles Lyell, seemed to show that a change was working in the minds of some of the greatest students of geo-

logical science. He (Mr. Dickinson) had recently placed before the Society the very same point to which Sir Charles Lyell had alluded, maintaining that granite and metamorphic rocks were of aqueous and not of igneous origin. He had for years been ranked among that little band who contended for that point; they had fought for it energetically, and in that Society he was the only man that had stood up for it. When Mr. Plaut read his paper on the Igneous Rocks of North Wales, he (Mr. Dickinson) stood alone in maintaining their aqueous origin; and when he (Mr. Dickinson) read a paper on nearly the very same point submitted by Sir Charles Lyell, he was so far repudiated by that Society that it had not found a place for that paper in its Transactions. Mr. Binney said that he was at the Bath meeting, and he heard nothing from Sir Charles Lyell in relation to the adoption of Mr. Dickinson's views. There had always been in that Society a desire to hear both sides of that question. In the early days of geology there was a great contest between what he might call fire and water—the Wernerists and the Plutonists, Edinburgh being the principal scene of the battle. The same battle had been fought in the Manchester Society and in the Geological Society of London. Sir Charles Lyell was one of those liberal-minded men who was always ready to learn. Whatever his preconceived views, or whatever he had said or written, if he thought the matter could be more truly put in another way he would put it in that way. Opinions had altered with regard to the character of the tectonics of Derbyshire, all of which showed that geology was a provisional science, and had to be advanced. They could not know everything at once, and some who had worked in the science 15 or 20 years must know more than those who had never worked in it at all. Mr. Plaut said that Mr. Dickinson had not correctly stated the remarks of Sir Charles Lyell. Sir Charles, relying on the researches of Prof. Scott, of Dublin, and the Rev. Prof. Haughton, modified some of his previous expressions about granites, by saying that there were at least some which were not of igneous origin. He had nowhere stated that a great change had come over his opinions with regard to granites, and that they were of aqueous origin.

**SOCIETY OF ENGINEERS.**—The annual dinner of this progressive society took place on Dec. 15, at the London Bridge House Hotel. The chair was occupied by Mr. C. J. Light, and the vice-chair by Mr. Carrington. The usual loyal toasts having been drunk with the accustomed honours, the Chairman gave "Success to the Society of Engineers," and in doing so stated that one and not the least evidence of the growing success of the society was the increased number of visitors at the present banquet, among whom were gentlemen who held a high position in the engineering world, and also some eminent contractors and manufacturers. With this toast he had to couple the name of a gentleman to whose assiduous exertions the society owed its position and advancement—he referred to their worthy honorary secretary, Mr. Alfred Williams. To him he (the Chairman) would leave the onus of explaining the condition of the society and its prospects. The toast was "Success to the Society of Engineers, coupled with the name of their worthy hon. sec., Mr. Alfred Williams," which was drunk with enthusiasm. Mr. Alfred Williams, in responding, said there were societies which at their tenth annual festival could not show that they had made much progress or occupied such a position as the Society of Engineers. The faces of many present reminded him of the usefulness of such societies; there were gentlemen present, and whom they often met at their fortnightly meetings, with whom but for such a society as this they could never be brought into contact. The Society of Engineers brought them together to consult and confer upon all points of interest, upon which in most cases some satisfactory conclusions were arrived at; and the society also afforded opportunities of forming private friendships among those who might otherwise continue as perfect strangers. The various papers upon engineering and scientific subjects submitted at their fortnightly gatherings, although read for the general benefit of the million, yet their authors did not throw away their time or exertions, for while it redounds to the credit of the readers, it in many cases materially contributes to the individual welfare of the authors. (Hear, hear.) As members were aware, the Society's Transactions had grown from a small pamphlet to a large volume, and so much interest was taken in the various subjects discussed that many copies of the Society's Transactions were purchased by different foreign Governments. (Hear.) Having referred at some length to the steady and uniform progress which the society had made up to the present time, he expressed a confident opinion that it would continue to advance, and so long as it was in his power he would do his utmost to promote its progress. (Hear, hear.) The next toast was "The Engineering Profession," which was responded to in appropriate terms by Mr. Zerah Colburn, making special reference to the satisfaction he had experienced in attending the society's meetings. Other toasts being drunk, the party separated. It may be mentioned that Mr. Carrington has been elected the Chairman of the society for the ensuing year.

**EXPORTS AND IMPORTS OF BRITISH COAL.**—During the month of November the total exports of coal from the Northern, Yorkshire, Severn, and Scotch ports and from Liverpool, amounted to 693,167 tons, being an increase of 77,639 tons over the exports of November, 1863. The total exports from January to November, 1864, inclusive, were 7,459,534 tons, being an increase in favour of 1864 over the same period of 1863 of 416,786 tons. The largest exports were to France, 142,467 tons; the smallest to New Zealand, 140 tons. The exports from the Northern ports were 318,332 tons, from the Yorkshire ports 31,446 tons, from Liverpool 60,070 tons, Severn ports 218,153 tons, and Scotch ports 65,166 tons. The exports of coal coastwise from the port of Liverpool during November to various parts of England, Wales, Scotland, and Ireland, were 10,438 tons, being a decrease compared with November, 1863, of 92 tons. The imports of South Wales and other coals coastwise into the port of Liverpool during November, 1864, amounted to 15,010 tons, an increase of 8202 tons in favour of 1864. For the eleven months of November, 1864, these imports amounted to 121,427 tons, being an increase of 16,931 tons over the corresponding period of 1863. With regard to London, the total imports of seaborne coal, culm, &c., during November, 1864, were 257,903 tons, a decrease of 44,831 tons compared with 1863. The total imports of the nine months were 2,820,357 tons, a decrease of 175,280 tons over 1863. The coals brought into London by railway and canal during November, 1864, amounted to 218,621 tons, being an increase in favour of 1864 of 34,655 tons. The actual decrease of the imports into London during November, 1864, was 10,175 tons, and the actual increase of imports from January 1 to November 30, 1864, as compared with the same period of 1863, was 329,275 tons.

**COAL TRAFFIC OF THE LIVERPOOL DOCKS.**—A letter was read before the Mersey Dock board, on Thursday, from the Liverpool and Yorkshire Railway Company, complaining of the insufficiency of workmen on the high-level railway, by which coals are taken from the Liverpool and Yorkshire to the docks, to remove the contents of the wagons to the vessels. This high-level railway has been for a period of at least 12 years altogether unprofitable, and the letter was a surprise to many members of the board, who were not less pleased than astonished to find any demand for labour at all. The utmost willingness to provide additional hands was experienced, and it was stated that the new coal districts recently opened were likely to stimulate very materially the traffic in coal to these docks.

**THE NEW MANSFIELD COPPER AND SILVER MINING COMPANY** commenced smelting at their newly-erected works at Neukrug, on Dec. 12, and Sir Charles Bright, the Chairman of the directors, who had arrived a short time previously, was present at the inauguration festivities. Invitations were sent in the name of the Chairman, by Advocate Langenheim, agent for the company in Brunswick, to the Ministers and the local authorities, also to the Clausthal Mining School, and various private parties. A gaily decked extra train started from Brunswick at 11 o'clock, A.M., with the invited guests, stopped at Lutter to take up the gentlemen of the neighbourhood, and arrived at the furnaces at 12 o'clock. The workmen, over 200 in number, dressed in their new uniforms, were already assembled there, and were drawn up in order with their officers, the obersteiger and stiegers. Sir Charles Bright, supported by the consulting engineer, Mr. Blake, and the director of the works, Mr. Macdonald, the two latter wearing the very becoming Mansfield miner's uniform, received the guests, and mutual introductions took place. Salutes fired from the higher ground near the works gave the signal for the procession to arrange itself in the following order—the band taking the lead, then the banners, the English on the right hand, bearing the Royal Arms, with the red St. George's cross in a blue field, on the left hand, the Brunswick banner, with the arms of the State; then Sir Charles Bright, with his two supporters. The visitors following them representing the Chamber of Mines for the Duchy, the district law court of Gandersheim, the Clausthal Mining School, the Lutter Law Court; the officials from the Upper Harz, Hanoverian, Brunswick, and Communion Smelting Works; the clergy; and the officials of the Woods and Forests; then the company's flag, with the company's arms in the centre of a white field; and, lastly, the whole body of the miners. A halt was made before the building, and the guests were heartily welcomed by the agent on the part of Sir Charles Bright, and invited to partake of a luncheon in the meantime several thousand persons had assembled on the ground belonging to the works, on which plantations of fir trees had been improvised, and several pleasure tents had been set up by speculative publicans, in addition to the large tent erected for the entertainment of the miners. The furnace ground, favoured by the very beautiful weather, presented a most cheerful scene, assuming the character of an annual fair, and one could scarcely look long enough at the pleasant picture. At half-past 4 o'clock the firing of salutes gave the signal that the furnace would for the first time pour forth its glowing contents.

The guests (Sir Charles Bright in their control) and the miners arranged themselves before the furnace buildings, and Sir Charles Bright welcomed the gentlemen assembled, who stood, as it were, in the position of godfathers to the newly-erected furnace buildings, through his representative advocate, Langenheim. In a few appropriate words the latter gentleman described the origin of the company, and their mines and furnaces. He also, on the part of the directors, expressed his warmest thanks for the kind and ready way in which the Ducal Ministry, the Ducal Chamber, Direction of Mines, and the various authorities for the Duchy of Brunswick, have supported the undertaking. It was shown that the mining settlement belonging to the company, in consequence of the new concessions, had attained length of ten English miles, and gave the prospect of being able to carry on the works for more than 100 years, and he also explained what great advantages would arise for the surrounding district should the works continue to prosper. After an address from the miners to Sir Charles Bright, the first part of the festivities was brought to a conclusion with "A Thanks be to God," sung by the miners; and a "Gloria" for the New Mansfield Company.

The extra train conveyed the assembled guests to a state dinner in Seesen, and the miners and smelters and their families, 500 in number, were regaled on the furnace ground. The festive hall in Seesen was adorned with the portraits of Her Majesty Queen Victoria, His Highness the Duke of Brunswick, and the English and Brunswick standards. At the very cheerful repast, the health of "His Highness the Duke of Brunswick" was proposed by Sir Charles Bright in the English language; then the health of "Her Majesty Queen Victoria," by Count Hermann, of Göttinge-Wiesberg; then the health of "Sir Charles Bright," by Commerzienrath Volgander in the English language. The deputation from Clausthal, with their honoured preceptor, Prof. Bruno Keri, at their head, contributed very much to the general conviviality by the proposal of toasts, and the capital way in which they sang several miners' songs. The extra train conveyed the guests at 11 o'clock to the furnace ground, and after a halt of several hours, back to

Brunswick. Undisturbed merriment was kept up till the morning at the furnace ground. A really splendid, and in every respect successful, inauguration of a smelting work, to which every Brunswicker must wish the greatest prosperity. —*Deutsche Reichs Zeitung* December 18.

**CANADIAN MINERS' ASSOCIATION.**—An influential association has been formed at Sherbrooke, Canada East, with a view to disseminate correct information as to the mineral resources of the country, and to encourage the development of the copper veins known to exist in the neighbourhood. It is contemplated to hold public exhibitions of mineral ores and metalliferous deposits, under the auspices of the association, and it is hoped that from such an arrangement the best results will follow. The president is Mr. R. W. Heneker; and the vice-presidents are the Hon. A. T. Galt; four members of the legislative council, the Hon. P. M. Moore, L. S. Hamilton, John S. Sanborn, M. Laframboise; and Lord Aylmer; seven members of the Provincial Parliament, Messrs. J. H. Pope, W. H. Webb, G. Irving, J. B. Dorion, C. Duplain, W. Shanly, and J. O'Halloran; Col. B. Fomero; Prof. Miles; and Messrs. L. Stieper, A. Adams, T. Scott, C. Pearce, W. H. Hunter, O. Morrill, and Herbert Williams. It is confidently believed that the new association will command public confidence, and be enabled to afford an acceptable guarantee to those who associate with, or purchase from, Canadian miners, that the mines in question not only have an actual existence, but are not misrepresented. A system, based upon combination, must eventually take place in Canada, as in other mining regions; and to bring such a system into practicable and profitable display, some means of arresting excessive valuation must be resorted to, or mines that are actually good become damaged by irreparable misrepresentation. It is very truly stated that much of the prevailing uncertainty of mining originates from ignorance, which thorough professional investigation would have a tendency to reduce. The mineral resources of the Eastern townships are rich and extensive, and will eventually form the chief business interests of the community. Week after week we hear of new discoveries, and though all cannot expect to be equally fortunate, we cannot doubt that the year 1865 will find many extensive mining companies in active and profitable operation. Mr. G. H. Robertson has been appointed the secretary, and the management has been placed in the hands of a committee composed of Mr. J. G. Robertson, the mayor of Sherbrooke; Major King; Messrs. E. Clarke, W. Ritchie, R. Freeman, J. Griffiths, G. R. Robertson, T. Smyth, Thomas Mackie, Patrick Anderson, and Capt. Bruyeres. If the enterprise be carried on with the energy and integrity which the names of those connected with it would lead one to expect, it cannot fail to be productive of a very large amount of benefit.

#### FOREIGN MINING AND METALLURGY.

A certain check has been experienced in the Belgian iron trade,—that is, there is not so much animation displayed as has been noticed for many months past. It is anticipated, however, that this state of affairs is merely a reproduction of the ordinary course of events at this period of the year, and that when January has made some progress the current of business will be actively resumed, and that previous rates will be regained. The foremasters also hope that the financial crisis which has weighed so heavily over Europe for the last few months has reached its term, and that the creation of numerous new enterprises may be looked for. They calculate that if Belgian metallurgy has been so well able to resist recent embarrassments, there will be all the more activity when affairs revive; and they rely on an approaching advance in prices in the event of these presumptions being realised. Although a certain weight attaches to these views and anticipations, the foremasters must act with prudence, as before "majorating" prices or extending production, care must be taken to ascertain that the revival in iron is founded on solid bases. Meanwhile, Belgian metallurgists may be said to be in the present state of affairs, as of all the siderurgical centres the Belgian group has the most stable position. A Chartered report says:—"A new adjudication for rails will take place at La Haye on Tuesday, Dec. 27; it is proposed by the administration of the Dutch State lines. The quantity to be adjudicated for is 10,000 tons, divided into five lots, with accessories. At the same time an adjudication will take place for 300 tons of scrap iron. The delivery of these lots must be effected before Nov. 1, 1865. The conditions of manufacture and reception are nearly the same as those of the *cachet des charges* of an adjudication which took place in February last. Several other important affairs are understood to be in negotiation by our foremasters. At London, Prices have regained more firmness; they are going from 6½ to 6½, 6½ to 6½, per ton, and one special advantage obtained is that in the majority of contracts on foreign account our foremasters have obtained the suppression of the guarantee system. They have done business in this manner in America, Egypt, and elsewhere. Several Journals have reproduced a note inserted in the last bulletin of the committee of French foremasters with reference to a contract for 6000 tons of rails concluded by the Syndicate of Belgian foremasters. This piece of news is, however, now two or three months old; it refers to rails to be furnished to the Calais-St. Omer line. There has been a marked revival this week in the demand for merchants' iron; all our works have received numerous orders, and prices cannot fail to be influenced in consequence. Already concessions agreed to a fortnight or three weeks since are only recorded in very important affairs. Before Jan. 1, tariffs will be revised in all their rigour. There is no alteration in pig." At Liège prices have experienced no material variation; the demand is a little feeble, but sufficient to maintain a good deal of activity in the works. The price of pig is very well maintained. The construction workshops of Liège might occupy, perhaps, a better position; at the same time, work is active in them. Ordinary coal has been firm in Belgium in common with richer qualities,—at any rate, prices are exceedingly well maintained, and the demand is active. At the same time, the extraction is still pronounced exuberant, and the want of new sale outlets is experienced.

There has been no great movement of late at St. Dizier. This is what usually happens at this period of the year, as the majority of merchants are taking stock in December, and naturally await the end of this operation, in order to know the state of their wants. Pig remains neglected, although its price is nominally unaltered, and stands at 4½, 1½, 3d. to 4½, 1½, per ton for charcoal-made; 3½, 1½, to 4½, per ton for mixed, and 3½, 1½, per ton for coke-made. Rolled iron has been held at 2½, per ton, first-class, with a scale of 4s. to 4s. 6d. per ton, and 2½, per ton, second-class, with a scale of 3s. 12d. to 4s. 12d. per ton. The fabrication of sheet-iron has become a matter of great difficulty, in consequence of the exigencies of consumption, in respect to the different thicknesses which it demands; and this fabrication seems likely to become a kind of specialty for two or three works. The Donjeux rolling-mill is that which has applied itself the most sedulously to this kind of work, and which has succeeded the best with it. By a judicious selection of wood-made pig, by a system of puddling pursued so as to obtain a fine-grained iron, by careful work, and by perseverance in this specialty, M. Bonnor has arrived at a most successful fabrication in all specifications, and so much in thickness. What is especially interesting at M. Bonnor's works is the great number of varieties of thickness to which the fabrication is applied in order to meet the wants of the trade. Thus, some orders stipulate for sheets of the thickness of the two hundred and fiftieth part of an inch. It is obvious that when we say that M. Bonnor succeeds in such a fabrication we virtually say that he excels in it. Machine No. 30 iron is firm, at 9½, 1½, per ton, free at Paris. Orders are falling off to some little extent in the St. Dizier foundries, and are being sought by some establishments. We understand that an iron ship is now being constructed in the yard of the Compagnie Générale des Pagnoules at Cherbourg, Le Havre, and St. Nazaire. This ship, which is about 1000 tons burthen, is the first of the kind which has been built at St. Nazaire in the same manner. The *Moniteur de la Marine*, referring to the great coal supply question, admits—at any rate through a correspondent,—that the coal of England and Belgium is generally superior to that of France. In making this avowal the *Moniteur* has, as may be expected, given considerable offence to French pride and self-complacency. One writer on the subject says:—"We have in France coal at least equal to that of England and Belgium, as we have inferior. It is the same with the two countries which have coal inferior to certain of ours. Thus, the basins of the Nord and the Pas-de-Calais are the continuation of the basins of Mons and Charleroi, belonging to the same coal formation. All four basins possess absolutely the same qualities of combustibility. The only difference that exists between them is that the basins of the Nord and Pas-de-Calais—and especially the Pas-de-Calais—present much more sloping beds, which are more difficult to work, and render necessary, in consequence of certain geological facts, the creation of collieries costing three times as much as those of England and Belgium. The coal of St. Etienne, the Saône-et-Loire, Allais, Bracasse, &c., offers, also, qualities equal to the best Mons or Newcastle coal. The coal of these French basins is now employed in supplying our marine service at Cherbourg, Le Havre, and St. Nazaire. This coal is of the Nord and the Pas-de-Calais. This French coal is found absolutely similar to that of the English coal which was used before the war in Italy. I am completely of the opinion of the writer in the *Moniteur de la Marine*, when he says that the high price of our coal must be attributed, in a great measure, to heavy transport rates. He might have added that it is also due to the absence of a direct and economic means of circulation, which would render coal cheap in all our centres of consumption." The reported intention of the French Government to acquire mines on the German frontier of France continues to be discussed, but appears to be surrounded with numerous difficulties. The mines in question are those of Hanau, in the Grand Duchy of Frankfurt-on-the-Maine, and in order to reach Forbach, the point on the French territory which is nearest to these mines, the transport of Hanau coal would involve an outlay of 5s. per ton. The Hanau coal would also have to traverse, as it were, the considerable mines of Saarbrück, belonging to the Prussian Government, and a basin situated within some few miles of Forbach—so near, indeed, that Prussian coal, when sent to Forbach, only costs 5d. per ton. It is obvious, then, that the Saarbrück coal would have over the Hanau coal the enormous advantage of 4s. 7d. per ton on the score of transport alone. The selling price of the Prussian coal at Saarbrück ranges from 5s. 10d. to 7s. 6d. per ton, and the return price ranges from 3s. 4d. to 4s. 2d. per ton. But it would be easy for the Prussian Government, so as to prevent the loss of an assured clientele, which it has enjoyed for many years, to reduce its selling price to 5s. or 4s. 2d. per ton. Again, it is asked, if this Hanau bearing is so rich and so advantageous a one, why do the local coal workers (who are, probably, more able than the French Government to produce coal economically) and the rich bankers of Frankfurt not develop this dormant wealth themselves, instead of offering this depot of combustibles to a foreign Government, which would, probably, only play a ridiculous role in the affair?

A royal Belgian decree, of Dec. 8, 1864, approves the prolongation of the existence of the Marcinelle and Couillet Company, and its new statutes. The share capital is represented by 24,000 shares, which do not make any precise mention of any specific amount of capital. The balance-sheet is to be brought down to March 31 in each year, and the net profits realised by the company are to be applied—10 per cent. to the reserve fund, 85 per cent. to the shareholders, and 7 per cent. to the administrators, commissioners, and manager. When the reserve fund has attained a total of 40,000, the deduction on this score may be reduced from 10 to 5 per cent., and it will cease altogether when the fund has reached a total of 80,000. The dissolution of the company may be decided on, in case 25 per cent. at least of the subscribed capital should be lost, and this dissolution becomes obligatory if the loss rises to 50 per cent.—unless, indeed, a meeting, representing two-thirds at least of the shares issued, decides on the continuation of the undertaking. The new statutes will come into force April 1, 1865. We give these arrangements in some detail, in order to show how these Belgian metallurgical enterprises are organised. The Thy-le-Château Blast-furnaces and Forges Company has announced payment of interests in respect to 1864. The Fontgibaud (France) Mining Company has announced a dividend of 16s. per share, in respect to the exercise 1863-4. The Phoenix Mines and Ironworks Company at Laas (Prussia) will pay, Jan. 2, a dividend in respect to 1863-4, at the rate of 850 cent. (2½, 1½) upon its A shares, and at the rate of 694 per cent. (1½, 6s. 10d.) upon its B shares.

To turn to the foreign metal markets, we may note that the position of copper continues sensibly to improve. Thus, without any very important transactions having taken place, the article has been held more firmly, at preceding rates, at Paris. Prices have sensibly hardened at Havre, as regards Chilean, some lots of which have been dealt in at 84½ to 85½, 8s., the tendency being towards a resumption of a former position of 86½, per ton. There has been much doing in the Antwerp market; only some small unimportant arrivals are reported. The improvement has been less decided at Berlin; there is little animation on this market, consumers maintaining an attitude of reserve, and responding but slightly to the



offers of holders; prices display no variation. At Hamburg there is decidedly a better tone; fine qualities of Russian have been particularly sought after, and having given rise to some affairs; as regards other sorts, the demand is not so active, but the tendency is good, and a more animated state of things is anticipated, probably at rising quotations, stocks being very limited. The Cologne and Silesian markets have been firm. Tin continues to fall in price, purchases being limited on most markets to the strictest requirements of consumption. On the Dutch market, Banca has gone to 57½ fls. (sellers). The Paris tin market has been feeble, and prices have experienced a further fall, Banca being quoted 102½; brilliant Detroit, 99½; and English, 160½ per ton. The article remains without enquiry, and at unaltered rates, at Berlin and Cologne. At Hamburg, transactions have only taken place to meet the most urgent wants. Lead maintains a tolerably satisfactory position, without, nevertheless, provoking a considerable demand. The Paris market has been quiet, rough French making 21½ ds., and rough Spanish 22½ ds. per ton. Affairs in lead at Hamburg have shown no great animation, but prices have been sustained, in consequence of the more favourable advices from London; the stocks on hand are considerable. The Berlin market has remained without variation. At Cologne the demand has been moderate, and prices have been firm. The Rotterdam market has been less animated, and Stolberg lead has slightly given way. The state of the tin trade has not been very favourable on the Silesian and Hamburg markets, so far as transactions are concerned; nevertheless, holders display greater firmness in their pretensions, although buyers pay with reluctance the prices insisted on. On the Paris market, rough Silesian zinc has fallen from 22½ ds. to 22½ ds. per ton; lead from other sources has made 22½ ds. per ton.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

DEC. 22.—To-day a very influential meeting of ironmasters, about 100 being present, was held at Nock's Hotel, Birmingham, to consider the question of reducing the wages of puddlers and millmen, and others employed in the works for the conversion of pig into the manufactured article. There was a long deliberation, there being present, besides South Staffordshire and Worcestershire ironmasters, representatives of the trade for North Staffordshire, Derbyshire, Yorkshire, and the North of England. It was unanimously decided to give a fortnight's notice from the 31st to reduce puddlers' wages 1s. per ton, and millmen at the rate of 10 per cent., and this step was concurred in by the representatives of all the other districts, who pledged themselves to its adoption by those they represented. South Wales was not represented, but it is understood that a reduction will also be made in the district at the beginning of the year. As to this reduction, it may be worth while again to explain that for many years puddlers' wages, which regulated those of other ironworkers, fluctuated with the trade price of bars, being in shillings while the latter was in pounds. During the long depression in the trade, however, prior to the autumn of 1863, bars were at 7½, but puddlers were paid 7s. 6d. At that time, after the puddlers' strike, bars were raised to 7½ 10s., and puddlers' wages to 8s. 6d.—that is, 1s. above the old proportion, the competition of new districts having, it was felt, at once reduced the price of iron, whilst it had increased the demand for puddlers, whose ranks, during a period of low wages, were less rapidly recruited. A second advance in iron, which was 1½ per ton, was made, and puddlers' wages raised another 1s., and a third advance of 1½ led to another advance of 1s. to puddlers, and in each instance the millmen, colliers, and blast furnacemen were raised in proportion. The last 1½ on iron was very soon taken off, on which the miners and blast furnacemen were reduced by the amount of one of the three advances, which led to the long strike. Puddlers and millmen's wages were not, however, interfered with then, but it has been all along urged that they ought to have been. However, trade is now very quiet, and orders scarce, and the absolute necessity of reducing wages has been more and more felt, and at length action taken.

What the men will do remains to be seen. A letter, published in the *Birmingham Daily Post*, signed "William Hobson, General Secretary of the National Association of Ironworkers," states, on behalf of the members, that "if their employers admit that the trade is relaxing, they are willing to work two days a week rather than submit to the reduction." He further says—"There is no question about the willingness of some of the masters to reduce wages, but they will undoubtedly consider the question more deliberately on the 22d instant. They must be apprehensive of the scarcity of the labour market, and the pluck of the workmen, as was evinced in the year '63." What effect it may have on the men to find that the masters, imitating their example, are combining all over the kingdom to act together, remains to be seen.

At the present moment trade is very dull and orders scanty, and it will be decided at the regular quarterly meeting, on Wednesday next, at Wolverhampton, whether a further reduction in price will be made. It is not unlikely, so far as present appearances warrant, that 10s. per ton may be taken off, but this is at present quite uncertain, so far as the knowledge of the outer world is concerned.

A very gratifying event took place at Dudley last week, when a complimentary presentation was made to Mr. Henry Johnson by his brother mine agents of South Staffordshire, as a testimonial of their esteem.

On Friday morning an accident, by which the lives of several persons would have been jeopardised, was prevented by a cause altogether unexplainable. At Messrs. Grazebrook and Aston's, Gospel Oak Colliery, near Tipton, there is a pit-engine which is supplied with steam by two cylinder boilers, of which George Brooks and Joseph Hodgkiss, engineers, have the care, one by night and the other by day. Brooks had the engine in his care on Thursday night, and left after drawing up two men at midnight. Hodgkiss went to work at half-past five on Friday morning, but did not examine the condition of his boiler before he set the engine in motion. He let down seven persons into the pit, and was letting down a second company of eight, and was at the same time letting water into one of the boilers, when the boiler began to heave and "jump," with a rumbling noise such as generally precedes an explosion. At this time there were very near to the boiler some 50 men and boys waiting their turn to go down. To these Hodgkiss shouted that an explosion was about to happen, and, leaving the eight persons suspended in the shaft, leaped, himself, from the engine-house window, and escaped with the others. By some fortuitous circumstance the boiler, although rocking in its seat, yet held together. On examination certain of the plates were found red-hot, and the only evidence of the water that had been poured in was a little damp slit. The boiler had sprung in all the joints up to the fire and on to the bridge. The head engineer of the colliery described it as one of the narrowest escapes from a terrible explosion that could possibly have happened. On the same day Brooks and Hodgkiss were brought up custody before T. Perry and H. D. Best, Esqs., charged with wilful damage. The head engineer deposed that the boiler had suffered damage to the extent of 4½ to 5½, and that Messrs. Grazebrook and Aston desired that the men should be punished. Brooks confessed that he did not on the previous night examine the boiler after 8 o'clock; and he was sent to prison for 14 days. Hodgkiss was discharged with a caution. There can be no doubt that, had water been turned into the boiler, a terrible explosion would have occurred.

#### REPORT FROM DERBYSHIRE, YORKSHIRE, AND LANCASHIRE.

DEC. 22.—Commercial matters, as is usually the case just on the eve of Christmas, are generally dull, and the Iron Trade is in this respect no exception. Most of the houses are engaged stock-taking, and there is nothing doing except for immediate requirements. In the beginning of the new year a considerable improvement is anticipated, particularly in the railway department, to supply the requirements of four new lines, for which sanction was obtained last session. In the parliamentary notices just deposited, there is a remarkable increase in the number of railway schemes over those deposited last year. There is a fair business doing in the Steel Trade at Sheffield, but the rapidity with which several failures in that town have followed each other has caused some uneasiness in certain quarters. A feeling of confidence is gaining ground that the trade of the town is generally in a healthy condition. Since the re-election of President Lincoln an unusually large supply of orders have been received for goods required for war purposes for the Federal States. Most of the continental nations are buying freely of steel, and the requirements for that metal for India are reported to be increasing. The activity in the Coal Trade remains unabated, and there is every probability of a continuance of the demand. In most parts of Lancashire there has been an improved demand for coal for manufacturing purposes. The reports from the different coal-producing districts of Derbyshire are very encouraging. The hard coal for steam purposes is growing into additional favour. The Staffordshire and Yorkshire strikes have put many good contracts into the hands of Derbyshire coalmasters, and though the disputes are at an end, they are still continued. The Midland Railway Company have acted liberally with regard to rates, and Mr. Allport, the general manager, has openly avowed his intention, if possible, to increase the present amount of traffic one-third at least, by giving to coalmasters every possible facility in the rates and transit of coal.

A very long examination took place on Friday at Kimberley, Derbyshire, on the bodies of two colliers—Abraham Brown and Wm. Davies, who were killed on Nov. 18, at High Park Colliery, by an explosion of gas. Five or six other workmen were injured at the time, and it was considered miraculous that all were not killed on the spot. Mr. Swan was the coroner, and Mr. Evans, the Government Inspector, was also present. Mr. Harrison, manager, and Mr. Weston, under-manager for Messrs. Barber and Walker, at whose pit the accident occurred, were also present at the opening of the Court, but, by the unanimous request of the jury, they were ordered to retire before any evidence was taken. About 8 o'clock in the morning in question the deceased men were working the wagons in the pit; others were there with naked candles. A man named Joel Walters was standing in the gateway leading to the road, when he began to buffet the gas with his waistcoat, and drove it into the place where the colliers were working, and an explosion resulted. It was admitted that there had been gas in the place for a month previously. At the conclusion of the evidence, the foreman of the jury suggested that Walters and his son, who were both considered to blame, should be summoned before the magistrates by the coroner, and this was backed up by the opinion of the jury. The coroner said he should leave such a proceeding in

the hands of the Inspector of Mines. Mr. Evans, the Inspector, said he was not there for the purpose of laying proceedings against people, but to see that the evidence was fairly brought before the jury. He was there on behalf of the Secretary of State, and not for the purpose of prosecuting people. The jury returned a verdict of "Accidental Death," and recommended that the two Walters should be summoned before the magistrates for neglect of duty, as it was the opinion of some of the witnesses if they had let the gas alone the accident would not have occurred.

An unfortunate accident has occurred at the Park-lane Colliery, at Ashton, near Wigan, whereby two poor fellows lost their lives. The seam worked is the "Orrell Four-foot," and communication with the lower workings was cut off by a scaffolding across the shaft. Abraham Corns, the engineer, was lowering a party of four men to the 4 ft. mine, and when half the distance had been traversed he appears to have reversed his engine, which he considered required such a check to be applied to enable him to stop with ease at the "mouthing." Unfortunately, however, as the cage neared the spot at which it should have been brought to a stand, Corns forgot that he had already reversed the engine, and again altered its motion, the effect of which was to send the cage down the shaft with increasing rapidity. It dashed through the scaffolding, and the mistake having been discovered in the engine-house it was brought to a stand about 20 yards below the stage. The men in the cage saw the position in which they were placed, and it is believed that one attempted to jump out at the mouthing, but, failing, he fell to the bottom of the shaft, a distance of 61 yards, dragging with him one of the others; both were, of course, killed on the spot. The other two, who held fast to the cage, escaped with only a severe shock. Corns was taken into custody, but admitted to bail till the result of the coroner's enquiry is known.

The Strike in the South Yorkshire collieries has led to the introduction of coal-getting machines, and, therefore, it is argued the demand for working colliers will be greatly reduced. We do not think the colliers need have very serious fears upon this score. That an efficient machine for getting coals will before long be brought into general use we have every reason to believe; but that the colliers will thereby be thrown more into the power of the masters we do not believe. The effect of the introduction of machinery into other branches of industry has been to elevate the labouring man. It has raised him from being a machine himself to being the director and controller of machines. In the collieries the effect will probably be the same. The introduction of machinery for cutting out coal will immediately lessen the price of coal. With a lessened price will come an increased consumption, and it is not too much to expect that all the men who are now employed in handling the pick may be required at the more comfortable duty of superintending the machine. The colliers are more reasonable in this matter than the factory hands and agricultural labourers were before them, and we hear of no such objections being raised to the introduction of machines into collieries as were so loudly raised when it was proposed to introduce them into weaving factories and thrashing-mills. Like every other revolution, it must, of course, cause temporary derangement; but if the substitution of machine for hand labour in pits permanently transforms the working collier from a coal-getting machine of flesh and blood into the director of a coal-cutting machine of iron, he will in the end have good reason to be pleased with the change.

The new colliery near Wingfield, Derbyshire, is progressing satisfactorily, and to-morrow (Friday) a demonstration is to be made on the occasion of the completion of the tunnel and branch railway leading from the pits to the main line of the Midland. We shall note a few particulars next week. The sinking of pits is rapidly progressing, and early next year it is anticipated they will be at work.

There has been nothing material moving in the local stock and share markets, and business this week has been very quiet.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

DEC. 22.—The staple trades of the district remain in a fairly satisfactory state, and taking into consideration the time of the year, there is no room for complaint. Great interest is taken in the meeting of ironmasters, to be held at Birmingham to-day, in reference to the wages question, and the Welsh makers are expected to be strongly represented. As stated in last week's report, there is but little doubt entertained in South Wales that a reduction will be determined upon, and should such be the resolution arrived at, the men will act wisely in submitting to it without a murmur. The trade is in that critical state at present that any differences would seriously affect both masters and men. Certainly the men should remember that even the first-class firms have but very few orders in hand, and, therefore, a turn-out could now be stood, as regards the employers, better than for a long time past. In the steam-coal trade there is a good business doing, and the colliers are, as a rule, in regular employ. Where the colliers lose a turn now and then it is generally caused by want of vessels, and not from any lack in the demand. There is no change to record in house coal, except that the local and inland sale has increased during the last fortnight. Dullness characterises the tin-plate trade, and there are only a few of the works on full time.

The once celebrated Penyarden Works have again changed hands, and there is hope at last that there are good times in store for Penyarden and the neighbourhood, and, as a matter of course, Merthyr generally will share in the prosperity. About twelve months ago, it will be remembered, the works were purchased by Messrs. Davies, Williams, and Jenkin, and some time afterwards one out of the seven blast-furnaces was blown in, and a few of the puddling furnaces were set to work. It has been evident, however, for several months past that the new proprietors either lacked spirit or capital, and it is gratifying to be able to report that the works have this week passed into hands that are well known as capitalists of ample means, and who have earned a reputation for spirited management. The purchasers are Messrs. Fothergill and Co., of the Plymouth and Abernethy Works, and included in the purchase are both the Penyarden Works and the entire estate. There are seven blast-furnaces at Penyarden; and, as there are mills at Penrhebbas (part of the Plymouth property) idle for want of fuel, it is expected that several of the furnaces will be lighted as soon as the necessary repairs can be effected. As the new mill at Penyarden has been pulled to pieces, and the iron smelted, no bar iron is likely to be made there, and the make will, very probably, be confined to puddled. Messrs. Fothergill and Co. are now the proprietors of no less than 25 blast-furnaces at Merthyr and Aberdare. The Swan and Park Colliery, near Neath, lately worked by Messrs. Edward Thomas, Son and Co., has passed into the hands of Mr. Thomas Jenkins, of Britton Ferry. The colliery has some excellent veins of coal, and with good management it is believed that profitable returns can be made.

At the South Wales Colliery Company (Limited) half-yearly meeting, the following report was submitted by the directors:—"The directors submit a statement of accounts for the half-year ending Sept. 24, showing a profit of 14701. 19s. The directors recommend the shareholders to sanction a dividend at the rate of 10 per cent. per annum for the half-year, which would amount to 7491. 2s. 6d., and to carry the balance of 7211. 16s. 6d. to a reserve fund for contingencies, and future equitization of dividends. Since the formation of the company, the directors have acquired properties embracing 1588 acres of freehold and leasehold minerals, most advantageously connected for beneficial working. The colliery has produced 1400 tons of coal per week since Sept. 24, last, and as soon as additional works can be erected the directors calculate the produce will be much increased."—Crawshaw Bailey, Chairman. The report was adopted, and the dividend recommended declared. The company had in their bankers' hands, on Sept. 24, no less than 76451. 3s. 8d.

It is announced that arrangements have been concluded between the Great Western and Ognore Valley Companies, by which the former agree to lay down a narrow-gauge rail from Bridgend to Cardiff and Newport, with running powers to the Ognore Company. This is an arrangement of the greatest importance to the ironmasters and colliery proprietors of the Ognore and Llynvi valleys, for when the third rail is laid down they will then be able to send coal and iron to Cardiff and Newport for shipment without break of gauge. A large increase of trade is looked forward to as the result of this step, and it is hoped that the Great Western directors will see the utility of extending the narrow-gauge from Bridgend to Milford, for until they do so they do they will continue to receive but a limited share of the vast mineral traffic of South Wales.

The arrivals at Swansea include—the Sarcelli, from Algiers, with 300 tons of iron ore, to order; the Jean Baptiste, from Cherbourg, with 89 tons of iron ore, for Crawshaw and Co.; the Havre, from Havre, with 3000 bags of barilla and 14 bundles of old copper, for H. Bath and Son.

#### TRUTH'S ECHOES, OR SAYINGS AND DOINGS IN MINING.

The Mining Share Market has not been so active as anticipated, but a moderate amount of business has been transacted, whilst the enquiries for shares are fairly maintained. Improvements have been reported in several mines during the past few days, consequently a more animated market may be looked for. As the Mining and Stock Exchanges will be closed from this afternoon (Friday) until Tuesday morning next, some interruption to general business may be expected.

WHEAL SETON and WEST SETON have been dealt in, and still enquired for, at minimum rates.—CLIFFORDS have not been so active, although enquired for at lower figures.—EAST BASKETS have varied in price, but several transactions have followed, though enquired for at buyers' prices.—WHEAL BASKETS continue to be enquired for, and appear firm.—SOUTH FRANCES are in request, at nominal prices, and some shares have changed hands.—SOUTH CONDERBURY and CAMBORNE VEAN have been dealt in at minimum prices.—TINCROFTS have changed hands, without any advance.—EAST CARN BRESAS are in request, and slightly improved.—GREAT LAKES continue to be sought for at fair market prices.—BRYN GWIGGS have been done at nominal figures.—GREAT SOUTH TOLGUS have been in better request.—EAST GRENVILLE and WHEAL GRENVILLE have been dealt in at the present reduced rates, and prices have varied; in the former there is a tendency to improve.—GRANMER and ST. AUGUSTINE are a little more in demand.—NORTH CROFTS have been offered at lower rates.—SOUTH CROFTS are enquired for, at nominal prices.—NORTH TREKERRY continue flat.—NORTH SHEPHERD and NORTH CHIVERTON have been rather freely dealt in.—MAUDLIN still commands considerable attention, and numerous transactions have taken place at quoted prices.—HALLENREAGLES have been, and still continue, in request, at fair market prices.—GREAT WHEAL VOES have fluctuated, but left off steadier, with every appearance of an upward movement.—WEST CHIVERTONS are quoted lower, but little or no business has been reported at the minimum prices.

EAST BEVELLS have had a decline, but show a tendency to again advance.—GREAT EAST LOVELLS are rather quiet at present.—SOUTH LOVELLS continue to attract considerable attention, and have been done at an advance.—EAST VOES are enquired for at fair market prices.—GREAT WHEAL FORTUNES have been in request at minimum rates.—PROVIDENCE shares find buyers at fair market quotations.—SOUTH DARRENS have been rather freely dealt in.—EAST DARRENS have, as usual, been in request, but prices have varied, leaving off weaker.—MARK VALLEYS maintain their advance, and are still enquired for.—WEST CARBONS have been sought for, and prices improved.—NEW WHEAL MARTHAS are rather quiet.—KELLY BRATS are enquired for, at minimum prices.—HINGTON DOWNS have not been so active.—LADY BERTHAS have been rather extensively dealt in, showing a strong tendency to improve further.—EAST RESSLES have been freely dealt in, but prices have varied.—CROBONS have been rather quiet, but buyers, at nominal figures.—FRANK MILLS are in good demand, and NORTH DEVONA have changed hands.

EAST CARADON.—They have intersected the south lode by the 80 cross-cut; the lode at the point of intersection is rather disordered—very similar to the point intersected in the 70, which opened out a good course of ore. At present the north part, or branch, is yielding good stones of copper ore; it is expected when fairly opened a great improve-

ment will take place. The counter has fallen off in several points. The 70 east is now worth 51. per fm., and the 80 east is of the same value. The 60 east, on the new lode, is valued at 101. per fm., and west at 121. per fm. The 70 east, on the south lode, is producing savings worth 21331. 8s., computed at 491 tons.—MARK VALLEY has improved in several important points, and the value of a better quality, as will be seen by the monthly sale of 450 tons, which realised 17791. 15s. 6d.

HAWKMOON.—The prospects generally are of a more encouraging character, especially in the western part of the mine. There are several important points to which the operations are being directed, and when reached there appears very little doubt of being found productive, both for tin and copper. Small parcels of each are still sent to market, which assist materially the working cost of the mine. From the position of the mine, surrounded by productive and paying mines, there is great probability of this yet becoming a profitable undertaking.

MAUDLIN MINE.—The lode in the 70 and east continues of the same value as last noticed, and is about 4 feet wide, of rich grey and yellow ore; and as more lode is standing to the south a cross-cut will be commenced as soon as the level has been driven east to enable operations being commenced without inconvenience to the respective parts of men. Preparations are being made for resuming the sinking of the shaft to the 80, which will be commenced next week. Private reports still place a far greater value on the lode discovered than officially given, but it will require a few weeks to arrive at a correct estimation.

NORTH CROFT is reported to have improved in the 170 west, where the lode is worth 201. per fathom. They have also cut through the cross-course in the 120 east, and discovered a very promising lode, carrying good work for tin.

WEST CHIVERTON.—It has been rumoured that they had cut through the lode in the 90, and found it poor; but I believe that they have intersected the lode, but not yet reached the south part, which has hitherto been the most productive; the lode is 12 ft. wide, and they have from 4 to 6 feet further to drive. The 80 fathom level ends are not looking quite so well at present, but there are three winzes in the bottom of the 80 west which are worth together 3481. per fathom—4 ft., No. 1, is valued at 1001.; Nos. 2 and 3 1201. each. There is also a winze sinking below the 80 fathom level, on Elizabeth lode, worth 401. per fathom.

At CHIVERTON, the operations at Cookney's and Murray's shafts are progressing very satisfactorily, and expect to drain the mine sooner than anticipated from the late hindrances.—At WESTWORTH they have cut a very fine-looking lode at the new shaft, which is composed of gossan and good stones of lead.

EAST TREKERRY.—The prospects here are not devoid of interest, although the mine has not as yet proved so productive as anticipated; still there are numerous points to which the operations are being directed that are likely to become highly productive. The 12 and east is looking very promising, yielding some rich work for tin and copper, and is apparently passing over the productive lode. A slope in the back of the 12 west is worth 81. per fm., and one in the bottom 141. per fm. There are several other places looking remarkably well for early improvements, so that there is every reason to calculate on some important discoveries.

SOUTH ST. IVES.—The progress making here is highly satisfactory, according to the limited character of the operations; whilst the general prospects of the set, and the likelihood of tin which have been made, are sufficient to warrant the immediate erection of the most efficient machinery. There are several points where excellent work for tin has been met with, which cannot be rendered available or worked profitably until adequate machinery has been erected. They have recently opened on a very promising tin lode, which is looked upon as of great importance.

NORTH CHIVERTON.—The prospects of this mine are daily improving, and, according to a private report, received yesterday, from a well-known and disinterested practical agent, we learn that, in the 20 west there is a lode standing in the bottom, 4 feet wide, worth 3 tons of blende and 12 cwt. of lead ore per fathom. In the deep adit west there is a slope of a good appearance, 12 feet wide, yielding 5 tons of rich blende per fathom, and a slope of the same appearance, 10 feet wide, yielding 15 tons of blende and 12 cwt. of lead, worth 10 cwt. per fathom. At the little sum-shaft, in the back of the 12, there is a slope yielding 2 tons of blende and 3 cwt. of lead. In the 20 east cut the lode is 5 feet wide, yielding 1 ton of blende and 4 cwt. of lead. The prospects are the more encouraging, from the belief that on the old sum-shaft being sunk 7 or 8 fms. deeper, to enable them to get under the old workings, the mine will be in a productive and paying position.

At CAPE CORNWALL the mine has been forked to the 55, and they are busily engaged in clearing out several levels, and so far as several there is every reason to believe that large quantities of tin will be returned. The deeper levels are looked upon as the most important, where several good courses of tin are represented to have been left in the former workings; a short time now will enable them to test the traditional accounts.

WHEAL PROSPER (Breage).—Little or no change has taken place here for some time past. In driving the cross-cut in the 40, to intersect Treva's lode, they intersected a branch bearing towards that lode, on which they are now driving, carrying tin and copper ore—saving work. The appearance of this leader encourages the hope that the main lode will be found productive, and it is expected that they will reach the junction in about 5 fathoms further driving.

GREAT WHEAL METAL.—A very important discovery has been again made here, in the intersection of a lode 30 fathoms east of, and running parallel with, Wheal Metal lode; it is 20 in. wide, carrying tin throughout, and of a most beautiful character for that mineral in depth. The Wheal Metal lode, which was laid open a short time since, is still worth 251. per fathom. There are five well-defined and distinct lodes running parallel with each other within 100 fathoms, which can be most readily developed from the engine-shaft, which will command the whole by short cross-cuts, so that it requires only time to lay open and bring them into a productive and profitable position.—EAST WHEAL LOVELL continue to look remarkably well. The new shaft is nearly completed squaring down, and will be ready for the new pitwork in course of the coming week. The lode in the south shaft sinking below the 28 maintains its size and value, being still worth 901. per fathom. At the Turnpike shaft the operations are progressing satisfactorily, and the former character of the lode and value fully supported.

SOUTH LOVELL.—The operations both at surface and underground are progressing very satisfactorily. The recent discovery in the shaft on the Old Wheal Lovell south lode continues to maintain its size and value, being worth 251. per fathom, which is cleared about 5 fathoms from the surface. The western ore has improved, and is now worth 101. per fm. From the statements of miners who worked there at the last week, there is a rich course of tin in the bottom of the south shaft, which is about 5 fathoms deeper, so that as soon as the shaft is cleared to the bottom immediate returns will be made. A new engine has been purchased, and will be erected on the shaft which is in course of sinking on one of the Trevenen lodes, which proved so productive in that mine.

JAMES LANE.

From Mr. WILLIAM LEELEAN.—I believe that the response to the invitation some time since put forth by Mr. Alison, for the formation, before the meeting of Parliament, of an Association for obtaining a Reform in the Currency has been very feeble; if, indeed, there has been any response at all. The truth, I believe, is that there is such a wide diversity in the views and projects of the currency reformers themselves, that few practical men are disposed to examine any of them. Mr. Alison notices a remark of mine, and defends it as a scheme for securing the basis of the currency, by giving the Executive power to issue 20,000,000l. of Exchequer notes, of not less than 100l. each, which notes shall be a legal tender in all monetary transactions, and be receivable, also, in payment of taxes, &c., but not to be convertible into gold. These notes, added to the 14,650,000l., which the Bank is now permitted to issue without holding gold against it, would give a basis for a currency representing 35,650,000l., neither more nor less, for all the notes issued beyond this must be measured by the gold which the Bank holds in reserve against them.—Indeed, if I read the scheme aright, the Bank must hold two-thirds of the issue in these Exchequer notes, which it will have to purchase at their full value. The scheme is a little misty, but this is near enough. It is a very different "scheme," however, to that to which my remarks applied, as may be seen by a reference to the Journal of Nov. 19. That scheme was for the issue of, not 20,000,000l. of Exchequer notes, but of notes for an undefined amount, and for giving the Bank power to issue as many notes as it pleased, without the obligation of holding gold or any other valuable commodity against them! That was the proposition to which I took exception; and the notes to be so manufactured and issued were what I incidentally compared with the greenbacks of the Federal States. Whether Mr. Alison's present scheme, which would, perhaps, add a third to the medium of circulation, would so far reduce its value as to seriously inconvenience, or permanently injure, any class of persons who have fixed incomes, I will not take upon myself to affirm, though I am inclined to think it would. But that is a fair subject for enquiry, and any proposal for such an enquiry should be treated with respect. It has just been said by a very lucid writer, in a pamphlet on "Banking and Currency," that "the supporters of the Act of 1844 cannot escape from this dilemma, either the notes issued should have been limited to the amount of bullion, or, if 14,000,000l., in addition to the bullion money were necessary or desirable, or, if justifiable for the population and trade of 1844, an increase should now be made to meet the wants of the population and trade of the present period." Are these wants greater now than then? That the population is larger, and the trade and commerce more extensive now than in 1844 is certain; but, on the other hand, we have made wonderful advances in economizing the use and employment of money since that time, as the records of the clearing-houses for the London banks, country banks, and railway companies testify, the employment of a few thousands of pounds sufficing, with the other means employed, to settle transactions amounting to, probably, 1,500,000,000l. a year! But I am not going to dogmatise upon a question which must, after all, be decided by fact or evidence, and I advert to the subject chiefly to set myself right with Mr. Alison and other readers of the Journal; but also to point out the great difference between the unlimited supply of paper currency formerly advocated, and that now suggested as the thing to be desired.

This is all something for the future, however; what of the present? What in the markets is called "flatness"—that is, inactivity of business—is the characteristic of the week; as, indeed, it always is just before Christmas. There is no lack of money, although the continuous expectation of further demands for Egypt keeps up the rate of interest demanded for it, and prevents, *pro tanto*, all speculation. There are tempting things in the market, among which I may notice—confusing myself to the mining interest—GREAT LAKES, WEST CHIVERTON, PROVIDENCE, BEDFORD UNITED, SPARKNO, PRIDAN-DREA, and DARREN amongst dividend-paying mines, with a continuously good prospect before them. Among the mines which are not yet paying dividends, but which offer fine chances of considerable profits within a very moderate space of time, I would mention the MAUDLIN, NORTH CHIVERTON, WHEAL CHIVERTON, EAST TREKERRY, GREAT SOUTH CHIVERTON, WHEAL MARGERY, EAST LAKES, ROSEWANE CONSOLS, EAST PROVIDENCE, and EAST SNAREFIELD. These may all be recommended, not only on the ground of their intrinsic character and management, but on that, also, of the prices at which the shares may be had. The reports from some of them are still improving. At the DARREN they are working profitably at every point of the mine, and last week sold 20 tons of lead, at 181. 10s. per ton. It is understood that at the next meeting, in February I believe, a dividend of 21. per share will be declared on the original shares. The EAST LOVELL, in which the dividends are for the present in abeyance, the money being required for their new machinery, is going on very well, and will, I have no doubt, become soon profitable; and the same may be said of the CHIVERTONS, to which locality they are confidently looking for an extension of the good fortune which has attended the WEST CHIVERTON. There is nothing new to be said about the fortunate MAUDLIN MINES. Everything that is seen



sustains all the anticipations that were formed of them upon cutting the lode in the bottom of the 70; I have no doubt that they are on the top of another large bunch of copper. We may await with confidence the completion of the shaft upon which they are at work. I repeat, as I formerly did of the Great Laxey, that the shares in these mines must go up considerably in price, and the sooner the fact that they are to be had are purchased the greater will be the profit realised. The *PRINCE-AND-DEBRA UNITED MINES* have excited but little attention for a long time past, but they seem likely to come again into favourable notice. They are improving in every part, and a few shares at the present very low price are worth having; the same may be said of *WHEAT SPARKS*.

From Mr. EDWARD COOKE:—There has only been a moderate amount of business done in the Mining Market during the week, and that has been confined principally to a few mines, which may be enumerated in the following list:—Great Vor, West Caradon, West Chiverton, Wheel Bassett, East Wheel Vor, South Darren, North Chiverton, East Grenville, Great Laxey, East Caradon, Tincroft, Clifford, Frank Mills, Birch Tor, East Lovell, and East Carr Brea. In reviewing the merits of these mines, GREAT VOR stands unquestionably pre-eminent. The whole history of this mine, or rather mines, is full of interest, but as the particulars relating to them have been so frequently given in the columns of the Journal, it is not necessary for me to repeat them. Suffice it to say, that at an early stage of its working Great Vor was the most productive tin mine in Cornwall, returning at one period upwards of 200 tons of black tin per month, equal in amount, at the present price of that mineral, to 25,000*l.* Then came disaster to the company, owing to a great panic, and the failure of the Messrs. Gundrys, the bankers, who held large shares in the mine. The present company was formed some 11 years since, when operations were resumed upon the Old Vor lode, which had previously returned a fabulous amount of tin—I believe upwards of three millions sterling in value. Old deep mines are seldom found to be rich when operations are resumed upon them after having been abandoned, and this proved to be the case in the Old Wheel Vor part, for after an outlay of upwards of 400,000*l.* by the present company, it was abandoned by them again, and operations were then commenced vigorously upon the Wheel Metal part, from which very large returns of tin are now being made; in fact, it may be termed the richest tin mine in the world, for the extent of its workings. Some idea may be formed of the richness of this wonderful property, when, according to the estimated aggregate value of the various points in operation, upwards of 17,000*l.* worth of tin is extracted from every fathom of ground expended. A glance at the working plan of the mine must tend to convince anyone, having only a superficial knowledge of mining property, that there is a great and prosperous future in store for the Great Wheel Vor Company, and that their property is only partially developed at present. The principal shareholders are those who formed the present company, and who after having spent about 40*l.* per share, or nearly 250,000*l.*, witnessed their shares unsaleable at 5*l.* They, however, stuck to the ship, having great confidence in its real merits, and in the man at the helm (if I may use the term) of their affairs. It would be well for many other mining companies if they had such a managing director as that of Great Wheel Vor at the head of their affairs. There is everything to warrant the expectation that the original shareholders in Great Wheel Vor will not only receive back the whole of their outlay in dividends alone, but that it will be a dividend property for their children after them.

Before another week expires the new year will have been ushered in. Let us hope that it may prove an auspicious one for the country at large, and that no serious calamity may transpire to interfere with the legitimate enterprise of our capitalists nor the industry of the working classes generally. With the new year will, no doubt, be numerous new schemes introduced to the investing public, and great caution will be necessary in order to discriminate between merely spurious concerns and those possessing real merits. Too frequently, however, the public, or many of them, have been induced to apply for shares in worthless concerns, without endeavouring previously to seek disinterested advice as to their merits; hence, nothing but a loss of their money ensues, which might have been avoided by only a moderate amount of caution. Of course, it is not to be culminated upon that success will attend every recommendation of the most experienced in mining to investors, but I will venture to say, by means of a wire rope. Two or three months for the results. I would select the following as being the most eligible. Some, as will be seen, are divided and others progressive mines. I have selected from the latter such mines as will not, I think, trouble shareholders with any demand upon them in the shape of calls, as they are what may be termed self-supporting mines, or having sufficient capital called up to obviate the necessity of any calls for a long time, if any more are required at all. My list would be—Great Wheel Vor, Clifford United, Wheel Bassett, Wheel Seton, Tolvalden, Frank Mills, East Wheel Vor, North Chiverton, Chiverton Moor, South Darren, East Lovell, Great East Lovell, Tincroft, West Caradon, St. Day United. There is yet another mine that will create excitement in the early part of the new year, the name and details of which I will refer to at a future time. I would not pretend on any account to say that there are not other mines equally eligible. I am satisfied, however, with the above, and I believe whoever buys into the whole, or any part of them, at present prices will never have cause to regret doing so. Having submitted the above list publicly, it is quite competent for the public to avail themselves of it or not, that will depend upon how far they rely upon my judgment. At the same time, I have no desire to arrogate to myself any superior judgment to that of my contemporaries in the market, many of whom are as qualified to judge of these matters as I am.

In conclusion, I would beg to add that the mining interest of this country, although an important interest, has from its speculative character suffered great depression during the past six months, and prices of many very good mines have thereby been depreciated far below their real value. The coming six months is full of hope, and those who take advantage of the present favourable opportunity to buy, instead of waiting until the reaction takes place, when everyone wants to buy, will reap the greatest benefit. With these few observations I conclude, with a hearty desire that the coming new year may prove both a happy and prosperous one, to use the Cornish motto, to "One and All."

#### COPPER MINING—DEVON GREAT CONSOLS—No. V.

Devon Great Consols is, we believe, the only copper mine—indeed, the only mine of any description—in the Western Counties that uses locomotive power in the conveyance of its produce. The ore is shipped from quays at Morwelham, on the Tamar; and half a dozen years since its carriage thither from the mine over the roads by carts and horses used to cost about 5*s.* per ton—no inconsiderable addition to the expenditure on production. In November, 1859, however, a railway which had been constructed by the company at an outlay of about 10,000*l.* was opened, and by that means the ore is now carried at a little over 1*s.* per ton—four-fifths of the former expenditure on carriage being thus saved. The railway, although an expensive, has therefore been a very profitable undertaking.

The line is about four miles long, is on a narrow gauge, and in its course sweeps circuitously round the hills that overhang the Tamar, commanding a succession of the most delightful views the scenery of that notably beautiful river includes. It would add much to the enjoyment of the summer excursions up the Tamar if, leaving their steamers at Morwelham, they could take a trip upon the Devon Great Consols Railway. Though not, that we are aware of, licensed for passenger traffic, it is as well constructed as many a passenger line; and judging from a ride over it in a cushioned ore truck, it certainly is quite as comfortable as a means of transit. The greatest gradient is one in 48. The line terminates in an incline about half a mile long, the steepest part of which is at a gradient of one in three, and which communicates with the quays at Morwelham. A laden train takes about twenty minutes to go from the mine to the head of this incline; where there is a stationary engine to lower the train down to the quays, by means of a wire rope. Two trucks descend and two others ascend at a time—one pair reaching the bottom at the same moment that the other pair reach the top. Midway on the incline where they cross each other there is a double line of rails. The ascending trucks are most frequently empty; but by them is brought up the whole of the coals and timber used not only upon Devon Great Consols, but in some adjoining mines, which pay the former company for the carriage of ores and materials. The Bedford United, Collicombe, and West Maria and Fortescue Mines, are thus customers of Devon Consols, the former having a branch line to its dressing works. There are also branches to all the more important parts of the Devon Consols establishment—the principal dressing floors, the coal-yards, the stores, &c. The line is worked by two locomotives.

The ore-floors of the company at Morwelham are several acres in extent, and have a dock in the middle capable of accommodating six vessels of about 300 tons burden. Ships of that size, however, rarely come up the river, and the average burden would be more nearly 200 tons. The trucks run out over the floors from the incline on staging, so constructed that when the bottoms of the trucks—which slide backwards and forwards—are drawn out, their contents fall through upon the floor, which is tilted. Every truck load of ore went from the mine in a basket, and the quality, and this ticket guides the men in unloading. Each kind being deposited by itself, the heaps are turned over and thoroughly mixed as a preliminary to subsequent operations. For sale the ore is divided into "parcels" and subdivided into "doles"—a work which is effected in a very peculiar manner and with singular rapidity by the men employed on the floors. Fourteen men are usually engaged in the operation of dividing, twelve being occupied in pairs, carrying the ore in handbarrows, one as a "wiper," and one as a "striker." The parcels of ore are the lots in which it is offered for sale, and the quantity in each is generally kept within 100 tons. The doles are a heap into which the parcels are divided, there being commonly six. They are formed in the following way.—The carriers fill their barrows from a heap of thoroughly mixed ore—the contents of each being struck level with the edges by the wiper—and then turn them out at one spot, the striker giving the bottoms of the barrows as they are reversed a blow with the mallet, so that every particle of ore is knocked out. The carriers' next round is deposited at another point, and so they proceed until the whole of the doles have been commenced, when they go in succession to each as before until the entire parcel has been distributed. A barrow load is weighed at intervals, and as it is known how many go to a dole the weight of the parcel can be estimated with considerable accuracy. The men engaged in this work labour very hard, each barrow containing two hundredweight; but they obtain some relief by taking turns to wipe and strike.

The ore is now ready for "sampling" by the various smelting companies, which number only about a dozen. Their agents visit Morwelham once a month, and take portions—which they mix—from a couple of the doles in each parcel, selected by themselves. The samples thus obtained being subsequently assayed give the data upon which the smelters, who are the sole purchasers, tender for the ore at the monthly "ticketings," or sales held in the case of the Devon Great Consols at Truro, three weeks after the sampling. At the ticketings the representatives of the mines having ore for sale and of the smelters meet, and the latter hand in a list of prices—termed tickets—that they will give for each parcel of ore sampled. Of course a parcel goes to the highest bidder; and in case, as frequently happens, the same amount is offered by more than one, the parcel is shared. The tenders rarely differ much, and the demand always meets the supply. The week after the ticketing the smelters' agents again attend at the floors to weigh what has been purchased—a dole being weighed to determine the weight of a parcel—and to sample for the next ticketing. The proportion of water in the ore is usually about 5 per cent.—It is also ascertained, and a corresponding allowance made. The chair at the ticketings is always taken by the representative of the mine having the most ore on sale; the result of which rule has been that Devon Great Consols has presided at Truro ever since it commenced to sell. As the company sample about 2000 tons per month it follows that they have on sampling days 4000 tons of ore, at least, on the floors. The floors and dock are carried out by the company under contract for the Duke of Bedford, at the same time that they made their railway.

From the foregoing it will be seen that Morwelham is a place of considerable traffic. The exports would appear to be rather under than overestimated at 3000 tons per month, the doles on which are a part of the Bedford property. Its connection with the mining interest will explain the otherwise unaccountable fact, that a small river village should possess an inn which would well do duty as the hotel of a smart country town. The sale of the ore to the smelters would be generally regarded as completing the mining operations; but it is proposed to increase the establishment at Devon Consols by the erection of a calcining-house. In this the low produce ore—or arsenical pyrites—would be roasted, and the arsenic and sulphur driven off, to be collected in the usual manner, the residue, which is thrown away in arsenic works, being washed in order that the cop-

per it contains might be obtained by precipitation. The higher class low produce ore would also then be passed through the first process of smelting on the mine, and by a reduction to a "regulus" concentrated from 15 to 20 per cent. This would effect a considerable saving in carriage and in other ways.

Nearly the whole of the hands employed on the mine work upon the piece system, which is introduced wherever it can be used. The "pickers," who come to work in many cases as early as eight years of age, are, however, paid by time, their wages ranging from 4*d.*, when they first come, up to 8*d.* a day. From pickers the girls become cobbers, and can then get by piecework a day in some cases 1*s.* 3*d.* or 1*s.* 5*d.* The appearance of the girls employed in the dressing floors at Devon Consols is a sufficient indication that, whatever may be said of the work of the miner, their employment cannot be deemed injurious. They look the picture of robust health. The boys when of sufficient age go from the dressing floors underground, and take men's places as soon as they are able. The average wages of a miner may be estimated at 3*l.* 12*s.* a month; those of the men on the dressing floors at 3*l.* 5*s.*; whilst the men employed as dividers, wipers, and shippers at Morwelham, who also work by the piece, get from 4*d.* to 4*l.* 10*s.* The carpenters, smiths, and other mechanics receive the customary wages of their trade. There is a doctor and sick club on the mine, under the management of the company, to which the employees pay in fixed proportions, having the power of choosing a medical attendant for themselves. Nothing is paid by any whose wages are under 8*s.* a day; but as soon as they get that sum they pay 4*s.* a month for the doctor, and when they get a shilling they pay 6*d.* They do not pay to the sick fund until they become men, or get 1*s.* 6*d.* a day. Then 9*d.* a month is paid for the doctor, and 6*d.* for the sick fund. The advantages derivable from these contributions are medical attendance for themselves and families, and an allowance of 4*s.* a week whilst illness may unfit them for working. If injured in the mine 1*l.* a month is paid in addition by the company as long as it may be required. Provision is also made for cases of distress; and suitable employment on the establishment is found for men who have become incapacitated for manual labour. In case of fatal accident those dependent on the deceased are assisted by the company; and it is a rule of the mine that each of the men employed upon it shall in such cases subscribe one shilling for their relief.

There is a school well fitted up at the mine, with an efficient schoolmistress paid by the company; and the children of the employees attend at small charges.

The captains necessarily live upon the mine, and some of their residences command wide and picturesque prospects of the most pleasing character. A number of the miners and other workmen also live there; and the remainder find habitations at Tavistock, Gunnislake, South Sydenham, Lamerton, and elsewhere in the neighbourhood. Those who reside on the mine are in some measure a community to themselves, and find great solace for their isolation in music. Vocal and instrumental concerts of a very pleasant character are sustained among the families of the principal agents; and a brass band—known as the Devon Great Consols Brass Band—meets regularly for practice, under the direction of Capt. Cook. Sacred music is also much practised in connection with the choir of places of worship in the vicinity.

A visitor to the mine will be most forcibly and agreeably struck with the good order and decent conduct everywhere apparent. If all accounts be true, the "bal girls" of many a mine in Cornwall might well take a lesson from the females employed at Devon Consols. Among hundreds of men, young women, boys, and girls, the writer in the course of three days never saw an improper action, nor heard an improper word. No smoking is allowed. The girls at the dressing floors are very fond of singing psalms and hymns whilst at work, and their vocal efforts really have a pleasing effect. Perhaps the general tendency to do good which prevails can hardly be more strongly indicated than by the fact that upwards of 700 copies of the *British Workman* and *Band of Hope* are sent to the mine monthly.

Such facts as these reflect the greatest credit upon those under whom the operations of the mine are conducted; and chiefly on Captain James Richards, who has been the manager nearly since the commencement; Captain Cleme, the second agent; and Captain Isaac Richards, the chief dressing agent. To these gentlemen, together with every one else connected with the concern with whom he had to do in collecting the materials for these articles, it is but fitting that the writer, in concluding his account of the Devon Great Consols, should return his thanks for their unvarying courtesy, and the ready manner in which they imparted, regardless of the trouble it might entail, whatever information he desired. Thanks are also due to Mr. Morris, the resident director, for the kind manner in which, immediately on being applied to, he gave every facility for a through inspection of the works of the mine, both at the surface and underground.—*Western Morning News.*

#### ROYAL CONSOLIDATION OF MINES—No. IV.—REPORT.

##### DEVONSHIRE.

The mineral products of Devonshire are much the same as those of Cornwall. The principal mining districts are Tavistock, Dartmoor, Ashburton, and Bovey Tracey. The Devon Great Consols is the largest and richest copper mine in Great Britain, and its remarkable success has occasioned the opening of many other mines in the district.

ACCESS AND VENTILATION.—The system of working the mines in Devonshire is, for the most part, the same as that pursued in Cornwall; occasionally, however, the levels are run to a greater extent, and the shafts are not so properly secured being paid to the adequate ventilation of the ends. Ladders are the only mode of ascent and descent in use in this district; but the adoption of a man-engine was in contemplation at the Devon Great Consols Mine. During the interval between our first and second visits to this mine many improvements had been carried out for the accommodation of the workers at the surface.

HEALTH.—The miners in this district, examined by Mr. Bankart in the autumn of 1863, were found to be subject to diseases similar in all respects to those which prevail among the miners in Cornwall, and traceable to the same causes.

GENERAL OBSERVATIONS.—Changing-houses: The mines in the neighbourhood of Dartmoor and Ashburton have not been worked so extensively as in other districts. Among those visited by us was one recently opened, where great attention has been paid to the ladderway and works underground; but here and at other mines in the district common changes of houses (or improvements in the houses where such changes exist) are required. Clubs and Doctors: The subscriptions to the clubs are on the same scale as in Cornwall; the selection of the mine doctor is in some cases left to the men, and the plan works well.—Cottages: The miners' cottages at Tavistock are for the most part very good; but both there and in other parts of the county there is a deficiency of house accommodation.

##### LEAD MINES OF YORKSHIRE AND THE NORTHERN COUNTIES.

As much of the evidence with respect to the health of the miners has reference to the nature of the rock in which the working operations are conducted, a few remarks on the geological structure of the district may render the evidence more intelligible. The lodes of lead ore in this (as also in the Alston Moor) district are generally found in the great group of strata designated by geologists as the carboniferous or mountain limestone formation. In tracing this formation from south to north many modifications are found, both in the lithological structure and in the arrangement of the component strata. Prof. Phillips says "the most general character of the lower limestone series," that of the south, "is simplicity, but that of the upper series complexity." The demarcation between the two sets of strata is thus laid down by the same author:—"If a straight line be drawn from Jervaulx Abbey on the Yare through Kettlewell on the Wharfe to Ryelov Hill, near Malham, and thence continued westward to Lancaster, it will divide the Yorkshire limestone into two parts, remarkably contrasted in the character of the limestones. In the northern districts the lower limestone rocks are covered by a thick and complicated series of lime, sandstone, shale, &c. In the southern the strata are simple, and the limestones are in the main unaltered, and these are either united with the lower rocks, much altered in aspect, or reduced to nothing."

The mines at Grassington and in Wharfedale are worked for the most part in limestone and grit; those in Arkendale and the other districts north of Prof. Phillips's line of demarcation are worked in frequent alternations of slate and shale, grit, chert, and limestone. Many of the medical and other witnesses state that the dust produced in the mining operations affects the respiratory organs of the miners, the dust from the grit and plate-beds being far more injurious than that from the other rocks. The whole area occupied by the mines has been subjected to much disturbance at various periods since the deposition of the strata. Without entering upon the question of the mode of deposition of metalliferous veins, it may be assumed that they occupy what were fissures and cavities of the rock in which they are found, and that since their deposition they have been in frequent cases dislocated and thrown wide of their original bearings. Besides the fissures filled by metalliferous and other mineral deposits, there are many which remain void. The latter in some cases play an important part in the economy of a mine, by carrying currents of fresh air from above and abstracting the drainage water below, while in others they become sources of annoyance, sometimes of danger, by allowing water or injurious gases to accumulate until accidentally tapped by the miners.

The lead mines of the North of Yorkshire are situated for the most part in the higher districts of the three valleys, Swaledale, Toredale, and Wharfedale, which convey the drainage of the country from the high range of the Pennine Hills to the River Ouse. The tributary streams in the higher part of this area are very numerous, and commonly run in deep valleys or gorges, cutting through and so exposing the several strata occurring in their course. This configuration of the surface affords peculiar facilities for carrying on the mining operations, and consequently it is on these streams that the lead mines are for the most part situated. The deep valleys ramifying through the hills offer frequent opportunities for driving adit levels at various elevations, by which mode of access all subsequent operations are carried on at a comparatively small expense. An adit level judiciously placed facilitates the drainage and ventilation of the mine; it also affords an easy access for the miners, and egress for the ore and refuse, by means of wagons running on a tramroad, and propelled either by men or horses, thus saving the labour and expense of raising the products by either steam or water-power. In addition to these advantages, the ore is delivered on the banks of a stream, the most convenient place for preparing it for the smelting-house, and should water-power be required for driving the crushing-mills or other machinery, it can ordinarily be obtained from the higher course of the stream; consequently, steam-power is seldom required and rarely used in this district.

The surface of the country in the immediate vicinity of the mines is for the most part wild moorland, and the miners reside in small villages lower down the valleys, and have to walk from two to four miles to and from the mine. In some districts small parcels of land are attached to the miners' cottages, enabling them to keep one or two cows, and affording them healthful employment in the open air, which, combined with the fresh air they breathe in walking to and from their work, to some extent counteracts the injurious effects of previous exposure to the vitiated atmosphere of the mines.

[To be continued in next week's Journal.]

IMPROVED WATER-WHEEL GOVERNOR.—A machine designed to regulate the quantity of water admitted to water-wheels of any description, so as to cause them to run at a steady velocity, has been invented by Mr. J. E. Gillespie, of New York. The principle involved in this machine is that of a piston resting on a column of liquid—oil by preference—such column being supplied continually by a centrifugal pump working directly below the piston. There is an oil cylinder, and the piston-rod has a slotted yoke, which the pin of the vibrating lever works in. This lever vibrates on a centre by the action of an eccentric, which, in turn, is driven by gears. The fan in the pump raises the oil to the piston above through suitable openings. The oil in the pump chamber, and the oil is continually supplied to the fan through other openings. When the fan is driven at a certain velocity by a belt or gears, the piston on the rod stands at a fixed point, and a bar, which has ratchet teeth cut on one end, pushes a carriage out to a stated point on slides. A catch hooks over a stud on the rack, which is in direct communication with the gate on the penstock, so that as the bar works it advances or moves back the carriage, thus completely controlling the velocity of the water-wheel to which the apparatus is attached. When the catch is thrown back the

gate is disconnected from the governor, one revolution of which will completely open or shut the gate. An advantage in this machine is that it is always in gear to shut the gate, so that if the latch is not dropped, through carelessness, the wheel can never run too fast. The inventor states that it will run the gate from wide open to shut close in six seconds. The velocity of the wheel for a certain speed is regulated by applying weights to the cross-head, so as to increase the resistance to the piston. Many of these governors are now in use, and have been giving great satisfaction for two and a half years. Governors for steam-engines are also made on the same principle.

MANUFACTURE OF OXYGEN GAS.—A correspondent of the *Times*, referring to a late explosion, says:—"When a new sample of manganese is used, put a teaspoonful on a shovel, mixed with half its own weight of chloride of potash, and heat the mixture over the fire. If it flashes into flame or detonates, the manganese is dangerous; but if small scintillations run over the surface quietly, the mixture is harmless."

CLEVELAND IRON.—At the different iron manufactories at Consett, Widdon Park, Darlington, Stockton, and Middlesbrough, they are as busy as ever; and the men, warned, probably, by the announcement of the Staffordshire masters to reduce the wages of their puddlers and mill hands, are working very steadily, and have seldom been more industrious than at present. Byers Green Colliery was sold for 55,000*l.*, subject to a reduction of 3000*l.* as an equivalent for the right of Mr. Middleton, of Darlington, the original lessee, and who is entitled to the re-possession of what is termed the Byers Green Colliery in less than seven years. The most important part of the royalty, that of the Old Park, is sold for 17 years. The price given being at least one-half more than could be obtained a year or two ago, is a strong proof of the increasing value of coking collieries in the Auckland district. This is the last of the coking collieries sold belonging to the West Hartlepool Railway; and the realisation from this description of property is much more satisfactory to the directors of the company than they fairly expected when the bill was passed, compelling them to sell all such property within five years from the spring of last year.—*Darlington and Stockton Times.*

#### PRICES OF MATERIALS,

As charged at GREAT WHEEL VOR MINES during the following months:—

Description.	July.	August.	September.
Coals, common.....per ton	12 <i>s.</i> 0 <i>d.</i>	12 <i>s.</i> 0 <i>d.</i>	12 <i>s.</i> 6 <i>d.</i>
Ditto, Cardiff.....	18 4	18 <i>s.</i> 4 <i>d.</i> —20 <i>s.</i>	18 4
Iron, common.....per cwt.	9 <i>s.</i> 6 <i>d.</i>	9 <i>s.</i> 6 <i>d.</i>	9 6
Ditto, best.....	12 6	11 6	11 6
Ditto, S.C.....	—	—	—
Steel, cast and blister.....	45 <i>s.</i> —50 <i>s.</i>	45 0	49 0
Nails, patent 5 and 6-inch.....	20 0	20 0	—
Tallow.....	44 6	—	45 9
Grease.....	26 0	—	—
Oil, Gallipoli.....per gallon	5 9	—	—
Candles.....per dozen	5 3	5 3	5 3
Hills, pick.....	—	1 9	—
Powder.....per 100 lbs.	—	—	46 0
Cartridges.....per 100	38 <i>s.</i> —52 <i>s.</i>	38 <i>s.</i> —52 <i>s.</i>	38 <i>s.</i> —52 <i>s.</i>
Leather, bend.....per lb.	—	2 4	2 4
Ditto, butt.....	—	2 0	2 0
White yarn.....	0 6	0 6	0 6
Hemp.....	0 5½	0 5½	—
Timber, Norway.....per foot	0 7½	0 7½	0 8½
Ditto, pine.....	—	1 4	1 4
Ditto, birch and elm.....	—	2 0	—
Ditto, battens.....	0 2	—	0 2
Rope.....per cwt.	43 0	—	48 0
Stamp-heads, longshanks.....	9 0	—	9 0
Chain.....	31 0	—	37 <i>s.</i> —31 <i>s.</i>

#### Dublin International Exhibition.

DUBLIN INTERNATIONAL EXHIBITION OF FINE ARTS AND MANUFACTURES, 1865.

UNDER THE SPECIAL PATRONAGE OF HER MAJESTY THE QUEEN. Intending Exhibitors are informed that the 31st December is the latest day on which APPLICATIONS FOR SPACE will be received. The requisite forms can be obtained at the House of the Society of Arts, John-street, Adelphi, London, W.C., or at the Exhibition Palace, Dublin. By order, HENRY PARKINSON, Sec.

BIRKENHEAD RAILWAY—HOOTON AND PARKGATE BRANCH.—CONTRACTORS DESIROUS OF TENDERING FOR THE ABOVE CONTRACT may obtain bill of quantities and tracings from Mr. ABRAHAM LEA, C.E., Chester; or Engineer's Office, Railway Station, Birkenhead.

TO CONTRACTORS.—RHYL PROMENADE PIER COMPANY (LIMITED).—The Directors are DESIROUS OF RECEIVING TENDERS FOR THE ERECTION OF AN IRON PIER into the sea at RHYL, 1056 yards long. Plans and specifications may be seen upon application to Mr. W. WYNN, the secretary, Belvoir Hotel, Rhyll. The contractor will be required to take a portion of the amount of his contract in paid-up shares of the company. The directors do not bind themselves to accept the lowest or any other tender.

TO LANCASHIRE COLLIERY PROPRIETORS.—WANTED, an AGENCY for the SALE of a GOOD QUALITY LANCASHIRE COAL. Advertiser has a first-class connection amongst the largest consumers in Liverpool.—Address, "E. G.," *Journal of Commerce* office, Liverpool.

TO TIN AND TERNE PLATE MANUFACTURERS.—CAUTION.—ALL PARTIES are hereby CAUTIONED against INFRINGING THE PATENTS OF MOREWOOD AND ROGERS, E. MOREWOOD, or W. M. MORGAN, for COATING IRON with ROLLERS, and for REDUCING the TIN or TERNE COATING BY RACK AND ROLLERS, working in flux or in the coating metal. MOREWOOD AND ROGERS, Stratford, London, E.

TO CAPITALISTS.—THE LESSEE OF A FIRST-RATE COLLIERY IN NORTH WALES WANTS A PARTNER, with about £2000. A mining engineer or practical colliery manager might have the management. A profit of 4*s.* per ton can be clearly shown on the coal raised in the royalty, which is an extensive one.—Address, "Bryn," care of Mr. H. Greenwood, advertising agent, Liverpool.

TO INVENTORS AND PATENTEES.—A GENTLEMAN having an extensive connection with manufacturers, merchants, and others, would be GLAD TO UNDERTAKE THE SALE OF INVENTIONS or PATENTED ARTICLES, on commission.—Apply to Mr. RAWLSEY, patent office, 14, Clare-street, Bristol. N.B.—Continental and foreign agencies solicited.

WANTED, a YOUNG MAN, who must write a good hand, and be able to SURVEY and MAP (underground).—Apply to "Z. Y. X.," Post-office, Newnham, Gloucester.

WANTED, CARN CAMBORNE SHARES.—State number and lowest price to "H. H. P.," Post-office, Winchester.

CENTRAL RAILWAY OF VENEZUELA (LIMITED).—GUARANTEED INTEREST 11½ PER CENT.—FIFTY SHARES (£10 paid) FOR SALE, or will be EXCHANGED for QUEBRADA or OTHER SHARES. Address, "M. P.," care of Mr. Barker, news agent, 1, Castle-court, Birch-lane, Cornhill.

THE NEW CORNISH LEAD AND COPPER MINING COMPANY (LIMITED).—The directors of the above company do hereby summon the FOURTH ORDINARY GENERAL MEETING of the above company, and give notice that the same will be HELD at the Queen's Hotel, New-street, Birmingham, at Twelve of the clock at noon, on FRIDAY, the 30th day of Dec., 1864. By order, J. CHAMBERLAIN BARLOW, Sec. Office, 59, Waterloo-street, Birmingham.

COLONIAL BANK. Subscribed capital £200,000. Paid-up capital 500,000.

The Court of Directors of the Colonial Bank hereby give notice, that, in pursuance of the provisions of the Charter, a HALF-YEARLY GENERAL MEETING of proprietors will be HELD at the London Tavern, Bishopsgate-street, on WEDNESDAY, Jan. 4, 1865, at Two o'clock precisely, to receive the report of the proceedings of the corporation, and for the election of five directors in the room of the gentlemen who go out by rotation, viz.:—Sir W. M. T. Farquhar, Bart., M.P., William Tetlow Hubert, Thomas Mastersman, Thomas Naghten, and Thomas D. Hill, Esq., who, being eligible, offer themselves for re-election; also for the election of a director in the room of Henry Bruce Esq., deceased, and of an auditor in the room of Eden Colville, Esq., resigned.

Eden Colville, Esq., offers himself as a candidate for the vacant directorship; and James Scott, Esq., offers himself as a candidate for the vacant auditorship. Proprietors are requested to take notice of the following provisions of the charter, viz.:—Every proprietor intending to become a candidate, or to propose some other proprietor as a candidate, for the vacant office of director or auditor must, within ten days from the date hereof, signify by some writing under his or her hand, to be left with the same ten days at this office, either his own intention to become a candidate, or the name and place of abode of the candidate intended to be proposed by him or her. A list of candidates, with the names of the proprietors (if any) by whom they are proposed, will be exhibited in this office 14 days prior to the date of election. No proprietor will be entitled to vote at this meeting unless his or her name shall have been registered at least three calendar months prior to the date of election.

The transfer books of the corporation will be closed on the 27th inst., and re-opened on the 17th January, 1865. By order of the Court of Directors, C. A. CALVERT, Sec.

ASSAYS AND ANALYSES.—MR. JOSEPH GREEN, for the past 14 years professional assayer to the Chester Goldsmiths' Company, UNDERTAKES THE ASSAYING AND ANALYSIS OF EVERY DESCRIPTION OF MINERAL.—Assay Office, Chester.

NORTH OF ENGLAND MINING AND ENGINEERING OFFICES, MANCHESTER.

MESSRS. HARVEY AND CO., MINING ENGINEERS, AGENTS, AND SHAREDEALERS, CLARENCE CHAMBERS, MANCHESTER, are at all times in a position to deal in all the market Dividend and Progressive Mine shares, and also to advise on all mining matters, being practically acquainted with the business, and having a daily communication from the mining districts of Devon and Cornwall.

Messrs. HARVEY and Co. publish a monthly "Mining Circular," containing a valuable summary of mining information. Forwarded gratis on application. The Circular for January will contain special reports on Copper Hill, West Trevelyan, North Chiverton, and Frank Mills.

Bankers: National Provincial, Manchester; and the Alliance, Lotherby, London. MANCHESTER. MR. W. HANNAM, MINING, SLATE QUARRYING, INSURANCE, AND GENERAL SHAREBROKER, ROYAL INSURANCE BUILDINGS, KING STREET, MANCHESTER. A Monthly Investment Circular on application.



Plans of Mining Districts (showing the position of progressive mines in reference to those returning large profits), Railway Meetings, Joint-Stock Companies Intelligence and Advice as to the Purchase and Sale of Stock.—87, London-wall, E.C.



**NICHOLLS, WILLIAMS, AND CO., ENGINEERS,**  
BEDFORD IRONWORKS, TAVISTOCK.  
MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on the best and newest principles. We beg more especially to call the attention of the public to the manufacture of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS OF EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON AND HEAVY SHAFTS OF ANY SIZE. CHAINS made of the best iron, and warranted. RAILWAY WORK OF EVERY DESCRIPTION.  
ALL ORDERS FOR ABROAD RECEIVE THEIR BEST ATTENTION. NICHOLLS, WILLIAMS, AND CO. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.  
Messrs. NICHOLLS, WILLIAMS, AND CO. have always a LARGE STOCK OF SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

**PATENT FLEXIBLE TUBING,**  
AND BRATTICE CLOTH FOR MINES,  
MANUFACTURED BY  
**ELLIS LEVER,**  
PATENTEE,  
WEST GORTON WORKS, MANCHESTER.

**TAVISTOCK IRONWORKS AND STEEL ORDNANCE COMPANY (LIMITED).**  
(LATE GILL AND CO.)  
ENGINEERS, IRON AND BRASS FOUNDERS,  
MANUFACTURERS OF  
STEAM ENGINES, BOILERS, AND MACHINERY OF ALL KINDS.  
CHAINS, SHOVELS, EDGE TOOLS, AND EVERY DESCRIPTION OF CAST AND HAMMERED IRON FOR MINING, MANUFACTURING, RAILWAY, OR AGRICULTURAL PURPOSES.  
Machinery sent to all parts of the world.  
Foreign mining companies supplied on liberal terms.

**BEVERLEY IRON AND WAGON COMPANY (LIMITED).**  
RAILWAY WAGON BUILDERS, MAKERS OF THE PATENT PRIZE CLOD CRUSHERS AND AGRICULTURAL IMPLEMENTS, MANUFACTURERS OF PATENT WHEELS, &c., with wood or iron naves.  
Coach builders, wheelwrights, coach proprietors, &c., should use these wheels, as they are the best and cheapest in the world.  
Gentlemen, farmers, and others applying direct to the works will be liberally treated. Catalogues, prices, &c., can be obtained on application to the Works, Beverley, Yorkshire.  
JAMES DEWHIRST, Sec.

**RAILWAY CARRIAGE COMPANY (LIMITED),**  
ESTABLISHED 1847.  
OLDBURY WORKS, NEAR BIRMINGHAM.  
MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, AND EVERY DESCRIPTION OF IRONWORK.  
Passenger carriages and wagons built, either for cash or for payment over a period of years.  
RAILWAY WAGONS FOR HIRE.  
CHIEF OFFICES, OLDBURY WORKS, NEAR BIRMINGHAM.  
LONDON OFFICES, 6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

**THE BIRMINGHAM WAGON COMPANY (LIMITED)**  
MANUFACTURE RAILWAY WAGONS OF EVERY DESCRIPTION, FOR HIRE AND SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.  
EDMUND FOWLER, Sec.  
OFFICES, 3, NEWHALL STREET, BIRMINGHAM.

Swan Rope Works.

**GARNOCK, BIBBY, AND CO.,**  
CHAPEL STREET, LIVERPOOL.  
MANUFACTURERS OF FLAT AND ROUND HEMP AND IRON AND STEEL WIRE ROPES FOR MINING, RAILWAY, AND SHIPPING PURPOSES.  
MANILLA ROPE OF SUPERIOR QUALITY, FIFTY PER CENT. STRONGER, AND THIRTY PER CENT. CHEAPER, than Russian hemp rope.  
WIRE ROPE OF FIRST QUALITY WIRE, and the HIGHEST STANDARD OF STRENGTH.

**FRANCIS'S SLACK WASHING MACHINE,**  
SIMPLE, AND THOROUGHLY EFFICIENT, REQUIRES NO STEAM ENGINE. Will wash brass from the puddling-furnace. Price £25.—Apply to Mr. R. C. RAWLINS, Wyon Hall Colliery, Rulon.

**NEW COMBINED TURBINE, WINDING, AND PUMPING MACHINERY,**  
MANUFACTURED BY GEORGE LOW, MILLGATE IRONWORKS, NEWARK-UPON-TRENT.  
Who respectfully begs to bring the above to the notice of the mining public, as an exceedingly cheap and easy method of applying water-power for the above purposes.  
The TURBINE, WINDING, AND PUMPING MACHINERY are all fixed complete to one strong cast-iron bed plate, which can be placed in any situation without pit or excavation, and any height not exceeding 33 ft. from bottom of fall, the supply and suction pipe being all that is required to be connected to it, and can be brought in any direction. This combined machine can be easily removed when necessary.  
G. Low begs also to state that the TURBINE is the most efficient and the cheapest method of applying water-power for mining purposes.  
MANUFACTURER OF WINDING, PUMPING, CRUSHING, STAMPING MACHINERY, WINDING ENGINES, WATER WHEELS.  
IMPROVED TURBINE WATER WHEELS CONSTRUCTED EITHER TO WORK VERTICALLY OR HORIZONTALLY, and upon the MOST SCIENTIFIC AND EFFECTIVE PRINCIPLE.  
G. Low begs to recommend a special class of turbine adapted for extreme high falls (200 to 500 ft.), and consuming small quantity of water. This turbine will work with equal advantage, without running at an excessive velocity. Also,  
MANUFACTURER OF IMPROVED BORING MACHINES FOR DRIVING ADITS.

TO IRON AND COAL MASTERS, MINING AND QUARRY COMPANIES, &c.  
IMPROVED BLACK VARNISH,  
FOR PREVENTING IRON FROM RUST, AND WOOD FROM DECAY.

**ABRILLIANT JET BLACK, SUPERIOR TO PAINT IN APPEARANCE,** dries in less time, contains preservative qualities of the best description, and is economical in its use; one gallon, at 1s., is equal to 14 lbs. of paint, which costs 4s. For COLLIERY HEAD GEARING, RAILWAY WAGONS, BOILERS, CASTINGS, CANAL BOATS, &c., it is especially adapted. In casks containing 10, 15, and 20 cwt. each. In quantities of 1 ton and upwards, price £11 per ton.  
**TURPENTINE SUBSTITUTE.**  
Glover and Co. have now on hand a really splendid painting sample of spirits of turpentine substitute, a pure crystal, not more volatile than the genuine American turpentine, and quite inoffensive to smell. Price, 2s. per gallon, in 30-gallon casks.  
**PETROLEUM.**  
This oil gives a pure, white, soft, and brilliant light, easily regulated, and portable. For works or public buildings, where gas is not desirable, the brilliancy and economy of the article are unequalled.

**WASTE NO OIL.**  
STRONG IRON OIL CISTERNS.  
Not liable to leak, and which economise space in the stores. From 600 gallons, 48 diameter by 84 in height, price £10 10s., down to 10 gallons, 15 diameter by 21 in height, price 15s., WITH EVERY VARIETY OF SIZE AND PRICE BETWEEN.

**STRONG IRON BUCKETS:—**  
2½ galls. .. 4s. 6d. | 3 galls. .... 5s. 0d. | 3½ galls. .. 5s. 6d. | 4 galls. .... 6s. 0d.  
**WAGON GREASE.**  
GLOVER AND CO., No. 40, MANESTY LANE, LIVERPOOL.

**BASTIER'S PATENT CHAIN PUMP,**  
APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, MARINE, FIRE, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—  
1.—It utilizes from 90 to 92 per cent. of its motive power.  
2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.  
3.—It occupies a very small space.  
4.—It raises water from any depth with the same facility and economy.  
5.—It raises with the water, and without the slightest injury to the apparatus, sand, mud, wood, stone, and every object of a smaller diameter than its tube.  
6.—It is easily removed, and requires no cleaning or attention.

BASTIER'S PATENT CHAIN-PUMP may be seen daily in operation at Messrs. SAMUEL BAKER AND CO.'s Patent Rice Starch Works, Bromley-by-Bow, London, E. Cards of admission to be had on application to the inventor and patentee, Mr. J. U. BASTIER, C.E., 12, Gower-street North, London.

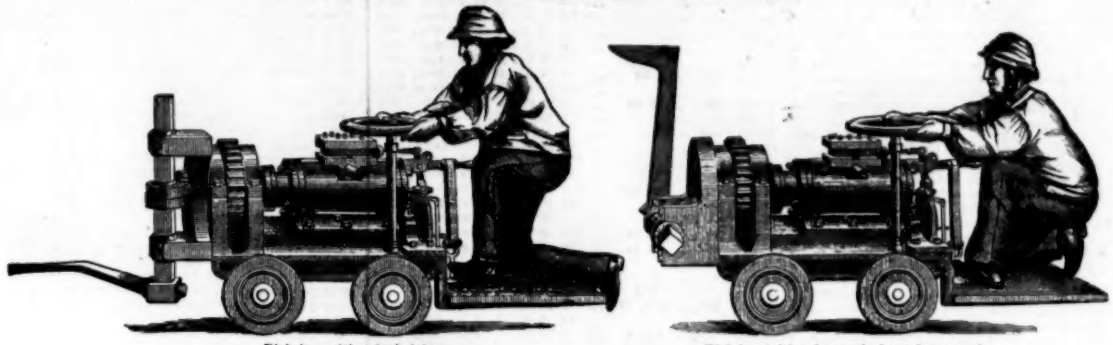
J. U. BASTIER, sole manufacturer, will CONTRACT TO ERECT HIS PATENT PUMP AT HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors, and others, for the USE of his INVENTION.  
OFFICES, 12, GOWER STREET NORTH, LONDON.  
London, March 21, 1859. Hours from Ten till Four. J. U. BASTIER C.E.

**THE STOCKTON AND HARTLEPOOL MERCURY AND MIDDLESBOROUGH NEWS** (published at Hartlepool) is eminently the organ of the Coal, Iron, and Iron Ship-building Trades in the extensive Mining and Maritime District of South Durham and Cleveland, with which it has been closely identified since its origin. The "Mercury" was for years the only newspaper published in South Durham and Cleveland, and is yet the only one published more than once a week. Advertisements to be forwarded to the publisher, Mr. JOHN H. BELL, Southgate, Hartlepool.

**THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER.** (ESTABLISHED 1764).  
Published every Saturday, price 2d., or quarterly 2s. 2d.  
**THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.**  
Published every morning, price 1d.  
Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 196, High-street, Sunderland.

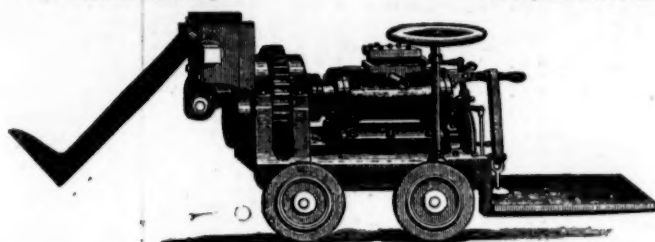
## COAL CUTTING MACHINERY.

JAMES GRAFTON JONES'S PATENT.



Pick in position for hoeing.

Pick in position for vertical cut downwards.



Pick in position for vertical cut upwards.

Messrs. JONES AND LEVICK, proprietors of this patent, are prepared to supply these Machines, which are on an improved principle, and are constructed to work the coal at any angle from the horizontal to the vertical, thus rendering them capable of "hoeing" at any angle, and of driving "headings." They are simple and substantial in construction, and are not likely to get out of order. They are already successfully employed in the Barnsley coal district, and are being introduced into the South Wales and other coal mining districts. They are also suitable for mining the argillaceous ironstones of the coal measures, as well as working other mines and quarries.

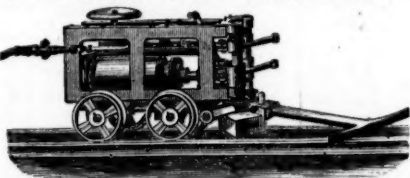
N.B.—Air Compressing Machinery will be supplied, or plans and specifications furnished.

Applications to be made to Messrs. FREDERICK LEVICK and Co., 4, Charlotte-row, Mansion House, London; or Messrs. LEVICK and SIMPSON, Blairston Ironworks, near Newport, Monmouthshire.

**COAL CUTTING MACHINERY.**  
THE WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY TO MAKE CONTRACTS FOR THE CONSTRUCTION AND USE OF THEIR MACHINES. The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN THE COST AND IMPROVE THE AVERAGE SIZE OF THE COAL, TO LIGHTEN THE LABOUR, and also TO MODIFY THE SANITARY CONDITION OF THE MINE. All communications to be made to Messrs. FINTH, DONISTHORPE, and BOWEN, No. 8, Britannia-street, Leeds.

**NOTICE.**—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, OR USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE.

### COAL CUTTING BY MACHINERY.



**MESSRS. RIDLEY AND CO. have, by recently PATENTED IMPROVEMENTS, COMPLETED THEIR TRUNK COAL CUTTING MACHINE, WORKED BY COMPRESSED AIR, and are NOW PREPARED TO NEGOCIATE FOR THE USE, AND TO SUPPLY MACHINES, which will be found to COMBINE SIMPLICITY OF CONSTRUCTION WITH PORTABILITY AND ECONOMY IN WORKING. By the use of these machines a CONSIDERABLE SAVING OF COAL IS EFFECTED, and the COST OF LABOUR MUCH REDUCED. Each machine will be guaranteed as to its capabilities, &c.**  
All applications to be made to Messrs. RIDLEY and Co., No. 11, South-street, Finsbury London, E.C.; or Mr. FENNY BANKART, agent, 9, Clement's-lane, E.C.

COALIERY PROPRIETORS are CAUTIONED AGAINST PURCHASING OR USING MACHINES, the construction of which will constitute an INFRINGEMENT OF THE ABOVE PATENT.

**THOMAS TURTON AND SONS**  
MANUFACTURERS OF

CAST STEEL FOR PUNCHES, TAPS, AND DIES,  
TURNING TOOLS, CHISELS, &c.  
CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT AND CRANK AXLES, SHAFTS and  
FORGINGS OF EVERY DESCRIPTION.  
DOUBLE SHEAR STEEL, FILES MARKED  
BLISTER STEEL, T. TURTON.  
SPRING STEEL, EDGE TOOLS MARKED  
GERMAN STEEL, WM. GRAVES & SON  
Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

**SHEAF WORKS AND SPRING WORKS, SHEFFIELD.**  
LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.  
where the largest stock in the world may be selected from.

**MESSRS. KNOWLES AND BUXTON, CHESTERFIELD.**  
MANUFACTURERS OF PATENT TUBULAR TUYERES.



THE PATENT TUBULAR TUYERE possesses GREAT ADVANTAGES over the ORDINARY TUYERES, both for its DURABILITY and EASY WORKING. A current of cold water going direct to the nozzle prevents their destruction, however much they may be exposed to the fire.  
We repair them at half the first cost, making them equal in size to new ones, all parties returning them carriage paid.

No. 1 tuyere, 16 in. long .....	28s. each.
No. 2 " 18 " .....	32s. "
No. 3 " 20 " .....	36s. "
No. 4 " 22 " .....	40s. "
No. 5 " 24 " .....	44s. "

Delivered at Chesterfield station. Terms, nett cash quarterly.

**MESSRS. W. EASSIE AND CO.,**  
RAILWAY SAW MILLS, MOULDING SHOPS, &c., AND  
GENERAL TIMBER CONVERTING YARDS,  
HIGH ORCHARD, GLOUCESTER.

ARE PREPARED TO FURNISH QUOTATIONS for any description of WOOD FITTINGS for home or foreign RAILWAY STATIONS, BARRACKS, EXHIBITIONS, DWELLINGS, WAREHOUSES, FACTORIES, STORES, GLASS HOUSES, &c.  
They will also CONTRACT for WOODEN FITTINGS OF ANY KIND IN CONNECTION with IRON BUILDINGS, &c.  
The above would in all cases be designed ready fitted, so as to ensure speedy re-erection. Numerous drawings of works of the above nature, already executed, can be seen on application, and references permitted to the engineers thereof.



The above Firm supply Barrows, Carts, Wagons, temporary Huts, permanent Shedding, and every description of Miners' and Contractors' Tools, at the very lowest prices. References can be given where many thousands of the above have been supplied to different parts of the world. Prices quoted on application. Delivered to any station, or home or foreign post.

International Exhibition, 1862—Prize Medal.



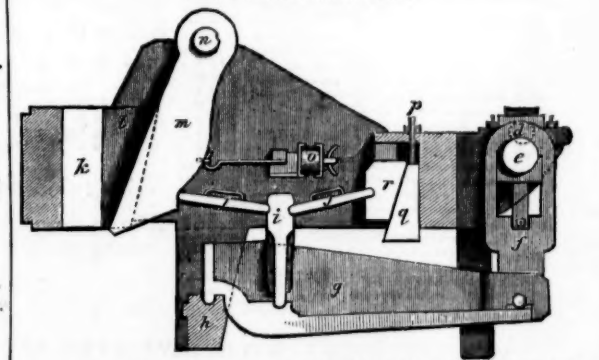
**JAMES RUSSELL AND SONS**  
(the original patentees and first makers of wrought-iron tubes), of the CROWN PATENT TUBE WORKS, WEDNESBURY, STAFFORDSHIRE, have been AWARDED A PRIZE MEDAL for the "good work" displayed in their wrought-iron tubes and fittings.  
Warehouse, 81, Upper Ground-street, London, S.

Prize Medals—International Exhibition, Class 1 and 2.

**PATENT PLUMBAGO CRUCIBLES.**  
THE CRUCIBLES manufactured by the PATENT PLUMBAGO CRUCIBLE COMPANY are the ONLY KIND for which a MEDAL has been AWARDED, and are now used exclusively by the English, Australian, and Indian Mints; the French, Russian, and other Continental Mints; the Royal Arsenal of Woolwich, Brest, and Toulon, &c., and have been adopted by most of the large ENGINEERS, BRASSFOUNDERS, and REFINERS in this country and abroad. THE GREAT SUPERIORITY of these melting pots consists in their capability of melting on an average 40 pourings of the most difficult metals, and a still greater number of those of an ordinary character, some of them having actually reached the EXTRAORDINARY NUMBER of 96 meltings. They are unaffected by change of temperature, never crack, and become heated much more rapidly than any other crucibles. In consequence of their great durability, the saving of waste is also very considerable.

The company have recently introduced CRUCIBLES SPECIALLY ADAPTED for the following purposes, viz.:—MALLEABLE IRON MELTING, the average working of which has proved to be about seven days; STEEL MELTING, which are found to save nearly 1½ ton of fuel to every ton of steel fused; and for ZINC MELTING, lasting much longer than the ordinary iron pots, and saving the great loss which arises from mixture with iron.  
The Patent Plumbago Crucible Company likewise manufacture and import Clay Crucibles, Muffles, Portable Furnaces, &c., Stove Backs, all descriptions of fire-standing goods, and every requisite for the Assayer and Dentist.  
For lists, testimonials, &c., apply to the Patent Plumbago Crucible Company, Battersea Works, London, S.W.

**BLAKE'S PATENT STONE BREAKER,**  
OR ORE CRUSHING MACHINE,  
FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.



It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England.

The above section illustrates Blake's Stone Breaker, just as made the last five years, and is fully protected in every part by patents.  
Extract from Specification:—A short but powerful vibration is imparted to one or both of the jaws by any convenient arrangement, and combination of powerful levers, worked by a crank or eccentric on the main shaft.

LEGAL PROCEEDINGS will be taken at once against any person or persons found making, using, or vending any machine, the construction of which will constitute an infringement on the above patent. Read extracts of testimonials:—  
Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent.  
Wm. G. HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz.  
Wm. DANIEL.

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## THE MINING SHARE LIST

## BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
1200	Alderley Edge (cop.), Cheshire [L.]	10 0 0	—	—	—
4000	Bedford United (copper), Tavistock	2 6 8	—	—	—
200	Bocawell (tin), copper, St. Just	2 7 6	—	—	—
5000	Bronfay (lead), Cardigan [L.]	15 7 6	—	—	—
916	Cargill (silver-lead), Newlyn	38	—	—	—
1000	Carn Brea (copper), tin, Illogan	15 0 0	—	—	—
2800	Clifford Amalgamated (cop.), Gwent	30 0 0	32	31 32	—
12000	Copper Miners of England	25 0 0	—	—	—
40000	Ditto (stock)	100 0 0	—	—	—
567	Cwm Erwin (lead), Cardiganshire [L.]	7 10 0	—	—	—
158	Cwmystwith (lead), Cardiganshire	60 0 0	—	—	—
280	Dewent Mines (sil.-lead), Dhrham	300	—	—	—
1024	Devon G. Con. (cop.), Tavistock [S.E.]	1 0 0	—	—	—
358	Dolcoath (copper), tin, Camborne	128 17 6	—	—	—
12000	Drake Wells (tin), copper, Calstock	2 1 0	—	—	—
513	East Basset (cop.), Redruth [S.E.]	39 10 0	50	45 50	—
6144	East Caradon (copper), St. Cleer [S.E.]	3 14 6	30 1/2	15 18	—
300	East Darnley (lead), Cardiganshire	32 0 0	—	—	—
128	East Pool (tin), copper, Pool, Illogan	24 8 0	—	—	—
8000	East Rosewarne (cop., tin), Gwennar	2 15 0	2 1/2	2 1/2	—
1200	East Wheal Lowry (tin), Wendron	3 18 6	13 1/2	13 1/2	—
2800	Foxdale (lead), Isle of Man [L.]	2 18 6	—	—	—
6000	Frank Mills (lead), Christow	2 18 6	—	—	—
37000	Great Laxey (lead), Isle of Man [L.]	4 0 0	25	18 19	—
4000	Great Wh. Vor (tin), cop., Helston [S.E.]	40 0 0	34 1/2	33 34	—
119	Great Work (tin), Gernoe	100 0 0	—	—	—
1024	Herodotus (id.), near Liskeard [S.E.]	8 10 0	—	—	—
400	Liburne (lead), Cardiganshire, Wales	18 15 0	—	—	—
2000	Mae-y-Safn (lead) [L.]	20 0 0	—	—	—
2000	Marke Valley (copper), Cardigan	4 10 0	5 1/2	5 1/2	—
3000	Miners Boundary (lead), Wrexham [L.]	1 0 0	—	—	—
1800	Miners Mining Co. [L.] (id.), Wrexham	25 0 0	—	—	—
30000	Mining Co. of Ireland (cop., lead, coal)	7 0 0	—	—	—
40000	Mwandy (iron ore) [L.] (id.)	2 10 0	—	—	—
200	Nanty Mines (lead), Montgomery	30 0 0	—	—	—
6000	New Birch Tor and Vitrifer Cons. (tin)	1 6 0	2 1/2	2 1/2	—
5936	North Trekerby (copper), St. Agnes	1 9 0	—	—	—
300	Parya Mines (copper), Anglesey [L.]	60 0 0	—	—	—
112	Providence (tin), Uny Lelant [S.E.]	10 7 6	36	35 37	—
812	South Caradon (cop., tin), St. Cleer [S.E.]	1 8 0	550	500 550	—
4000	St. Day United (tin), Redruth	14 0 0	—	—	—
940	St. Ives Consols (tin), St. Ives	8 0 0	—	—	—
2000	Tincroft (cop., tin), Pool, Illogan [S.E.]	9 0 0	16 1/2	16 1/2	—
1600	Torbay Hematite Iron [L.]	6 7 6	—	—	—
6000	West Basset (copper), Illogan [S.E.]	1 10 0	—	—	—
2000	W. Chiverton (id.), Ferranabuloe [S.E.]	—	62 1/2	53 55	—
280	West Damsel (copper), Gwennar	38 10 0	—	—	—
400	W. Wh. Seton (cop.), Camborne [S.E.]	47 10 0	210	205 210	—
512	Wheal Basset (copper), Illogan [S.E.]	3 8 0	100	92 1/2	—
613	Wheal Jane (silver-lead), Ken	3 10 0	—	—	—
4298	Wheal Killy (tin), St. Agnes	5 4 0	—	—	—
1024	Wheal Killy (tin), Uny Lelant [S.E.]	2 0 0	—	—	—
1024	Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0	14	13 14	—
100	Wh. Mary (tin), Lelant	36 2 6	—	—	—
80	Wh. Ovels (tin), St. Just, Cornwall	70 0 0	—	—	—
896	Wheal Seton (tin), copper, Camborne	68 10 0	200	195 200	—
1040	Wh. Trevelyan (sil.-id.), Liskeard [S.E.]	5 17 0	10 1/2	17 18 1/2	—
7000	Wicklow (copper), id., Wicklow	2 10 0	—	—	—

[\* Dividends paid every two months. † Dividends paid every three months.]

## BRITISH MINES WITH DIVIDENDS IN ABEYANCE.

240	Boscan (tin), St. Just	20 10 0	—	—	—
8000	Chiverton (lead), Ferranabuloe [S.E.]	0 0 0	6 1/2	5 1/2	—
3000	Condurow (cop., tin), Camborne	76 10 0	—	—	—
2450	Cook's Kitchen (copper), Illogan	15 9 0	11 1/2	10 1/2	—
1024	Copper Hill (copper), Redruth	12 0 0	—	—	—
512	Cradock Moor (copper), Devon	6 3 0	—	—	—
4076	Devon and Cornwall (cop.), Tavistock	6 3 0	—	—	—
8000	Dyffryn (lead), Wales	12 6 0	—	—	—
940	Fowey Consols (copper), Twardreath	4 0 0	—	—	—
6000	Great South Tolgus (copper), Redruth	0 14 6	—	—	—
1798	Great Wheal Fortune (tin), Breage	19 12 0	5	—	—
10240	Gunnislake (Clitters' Adit) (copper)	0 2 0	—	—	—
160	Levant (copper), tin, St. Just	2 10 0	—	—	—
140	Mount Pleasant (lead), id.	0 8 0	—	—	—
6000	Orsard (lead), Flintshire	0 8 0	—	—	—
4000	Par Consols (cop., tin), St. Blazey [S.E.]	1 2 6	—	—	—
1773	Polbreton (tin), St. Agnes	15 0 0	—	—	—
512	Polbreton (tin), St. Agnes	8 0 0	—	—	—
6000	Rosewell Hill and Ransom United	2 16 0	—	—	—
3000	South Exmouth (lead), Christow	1 14 0	—	—	—
613	South Tolgus (cop.), Redruth	8 0 0	—	—	—
496	St. Wh. Frances (cop.), Illogan [S.E.]	15 18 9	25	22 1/2	—
380	Spears Mine (tin), cop., St. Just	12 17 9	—	—	—
573	Trellyn Consols (tin), St. Ives	18 10 0	—	—	—
1000	Trumpet Consols (tin), near Helston	11 10 0	—	—	—
13000	Twelve Apostles Amal. (id.), Wrexham	1 0 0	—	—	—
4000	Vigra and Clogau (copper) [L.]	5 0 0	—	—	—
1024	Wendron Consols (tin), Wendron	19 13 0	—	—	—
60	West Burton Gill (lead), Yorkshire	60 0 0	—	—	—
1024	West Caradon (cop.), Liskeard [S.E.]	9 0 0	7 1/2	8 1/2	—
1000	Wheal Basset and Vitrifer (tin), id.	11 0 0	—	—	—
1024	Wheal Friendship (copper), Devon	20 0 0	—	—	—
896	Wheal Margaret (tin), Uny Lelant	11 17 6	9	7 9	—
2044	Wheal Tremayne (tin), Gwennar	6 11 3	—	—	—
4000	Wheal Trevelyan (tin and copper)	7 10 0	—	—	—

## FOREIGN DIVIDEND MINES.

90000	Australian (cop.), S. Australia [S.E.]	7 7 6	—	—	—
2454	Burra Burra (cop.), South Australia	5 0 0	68	—	—
4000	Central American (silver) [L.]	5 0 0	—	—	—
15000	Cape Copper Mining [L.] [S.E.]	7 0 0	11	10 11	—
12000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0	—	—	—
100000	Don Pedro No. Del Rey [L.] [S.E.]	0 12 6	—	—	—
70000	English and Australian	6 0 0	—	—	—
18000	East Indian Coal, Calcutta [L.]	10 0 0	—	—	—
25000	Fort Phillip (gold), Spain [S.E.]	2 0 0	—	—	—
25000	Gen. Mining Assoc. Nova Scotia [L.]	20 0 0	24	24 26	—
40000	Kapunda Mining Co., Australia [S.E.]	1 0 0	1 1/2	1 1/2	—
10000	Linares (id.), Pozo Ancho, Spain [S.E.]	3 0 0	6	6	—
10000	Lusitania (Portugal) [S.E.]	2 0 0	—	—	—
9275	New Wilberg (copper)	2 0 0	—	—	—
80000	Panalello (copper) [L.] [S.E.]	3 0 0	4 1/2	4 1/2	—
10000	Pontgibaud (id., lead), France [S.E.]	20 0 0	9	7 9	—
47000	Port Phillip (gold), Spain [S.E.]	2 0 0	—	—	—
11000	St. John del Rey [L.] Brazil [S.E.]	15 0 0	35	35 38	—
43174	United Mexican (sil.), Mexico [S.E.]	28 0 0	8 1/2	4 1/2	—
10000	Vancouver (coal) [L.] [S.E.]	5 0 0	—	—	—
25000	Victoria (London) Mining Co. [L.]	1 0 0	—	—	—
20000	West Canada Mining Company [L.]	1 0 0	—	—	—
45000	Yudana Mutana (cop.), S. A. [L.] [S.E.]	3 0 0	1 1/2	1 1/2	—

## FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Altan and Quannagen Unt. (cop.) [L.] [S.E.]	4 10 0	—	—	—
10000	Copiapu Mining Company, Chile [S.E.]	16 0 0	—	—	—
10000	Gr. Barrier Land, Min., N. Z. [L.] [S.E.]	15 0 0	—	—	—
108815	Marquitta and New Granada [S.E.]	1 0 0	—	—	—
85000	Alamillos (lead), Spain [L.] [S.E.]	1 0 0	—	—	—
300000	Anglo-Brazilian (gold) [L.] [S.E.]	0 17 6	—	—	—
20000	Bear's Tin Stream Mining Company [L.]	1 0 0	—	—	—
25000	Capula (silver), Mexico [L.] [S.E.]	1 0 0	—	—	—
17000	Central Italian (copper) [7000 £ paid]	0 6 0	—	—	—
10000	Copiapu Smelting [L.] Chile	10 0 0	—	—	—
75000	Don Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	—	—	—
80000	East del Rey (gold), Brazil [L.] [S.E.]	1 0 0	—	—	—
8000	English and Canadian Mining Company [L.]	8 0 0	—	—	—
40000	Fortune (copper), West Australia [L.]	0 15 0	—	—	—
80000	Frontino and Bolivia (gold), New Granada	0 15 0	—	—	—
80000	Great Northern (copper), South Australia [L.] [S.E.]	1 10 0	—	—	—
24000	Hindostan (copper), Bengal [L.]	3 0 0	—	—	—
4000	Hop Silver-Lead and Copper Mining Co. [L.] Jamaica	25 0 0	—	—	—
10000	Karibits Colliery Company [L.]	1 0 0	—	—	—
130000	Lagunas (sulphur, copper), Portugal [L.]	1 0 0	—	—	—
60000	Montes Aures (gold), Brazil [L.] [S.E.]	2 0 0	1 1/2	1 1/2	—
50000	Nova Scotia (lead and gold) [L.] [S.E.]	1 0 0	—	—	—
10000	Orea (copper), New Zealand [L.]	0 15 0	—	—	—
15000	Pachua Silver Mining Company, Mexico [L.] [S.E.]	1 0 0	—	—	—
6000	Peel River Land and Mineral (Limited)	200 0 0	—	—	—
23000	Quebrada (copper), Venezuela [L.]	6 10 0	—	—	—
80000	Rosa Grande (gold), Brazil [L.] [S.E.]	0 5 0	—	—	—
10000	San Roque (lead), Spain	5 0 0	—	—	—
30000	San Barbara (gold), Brazil [L.] [S.E.]	0 15 0	—	—	—
130000	Scottish Australian Mining Company [L.] [S.E.]	0 17 6	—	—	—
15000	South Europe Mining Company, Spain [L.]	2 0 0	—	—	—
12000	Teplitz Colliery Co., Bohemia [L.]	3 0 0	—	—	—
6000	Valegodemard Mining Company [L.] [S.E.]	10 0 0	—	—	—
40000	Vallianzas (gold), Italy [L.] [S.E.]	0 10 0	1 1/2	1 1/2	—
40000	Victor Emanuel (copper), Italy [L.]	1 0 0	—	—	—
1000	Western Africa Malchite (copper) [L.]	110 0 0	—	—	—
12000	Wheal Elton (copper), South Australia [L.] [S.E.]	5 0 0	—	—	—
8000	Worthing (copper), South Australia [L.] [S.E.]	1 0 0	—	—	—
75000	Yorke Peninsula, South Australia [L.] [S.E.]	1 0 0	—	—	—

## PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
700	Aberdovey (sil.-lead), Merion	4 10 0	—	—	—
1000	Alt-y-Crib (lead) [L.] [S.E.]	4 12 6	—	—	—
4000	Baigior (tin), copper, Redruth	2 0 0	—	—	—
4000	Bedford Consols (cop.), Tavistock	2 10 0	—	—	—
3200	Bodol Aur (lead), Holywell	10 0 0	—	—	—
500	Bullins (lead)	30 0 0	—	—	—
6000	Bocawell (tin), Kenwyn	2 10 0	—	—	—
8000	Bottle Hill (tin), Plymouth	1 8 6	—	—	—
30000	Bromlow (id.), Ministry of Salop	1 0 0	—	—	—
200	Brynmor Hall (lead), Flint	30 0 0	—	—	—
500	Bryn Gwlog (lead), Flint	9 0 0	20	18 20	—
1882	Bryntall (lead), Llandudno	8 7 6	—	—	—
8280	Buller & Basset (cop., Redruth)	4 11 6	—	—	—
916	Caivada (tin), Wendron	35 3 6	—	—	—
1000	Camborne Consols (copper)	15 0 0	—	—	—
4600	Camborne Vein & Wh. Francis [L.]	8 4 0	2 1/2	2 1/2	—
75000	Camborne Consolid. (id.) [L.]	1 0 0	—	—	—
8000	Cape Cornwall (cop.) [L.] [S.E.]	1 0 0	—	—	—
12000	Caradon & Phoenix Cons. [L.]	1 0 0	—	—	—
914	Caradon Cons. (cop.), St. Cleer	29 6 6	—	—	—
10000	Caradon Vale (copper)	—	1 11 0	27 1/2	—
6000	Carn Camborne (cop.) [L.]	4 10 0	—	—	—
20000	Carnarvon (3200 £ paid, 16000 £ pd.)	—	—	—	—
10000	Castleward, Ireland [L.]	1 0 0	—	—	—
2500	Cefn Cili (tin), Flint [L.] [S.E.]	2 10 0	—	—	—
800	Cefn Cwm Brynno (lead)	4 0 0	—	—	—
2500	Central Miners (lead) [L.]	2 14 0	—	—	—
3000	Chiverton Moor (lead)	3 0 0	—	—	—
4000	Clara Unit. (Ponterwyd) [L.]	2 2 0	—	—	—
1024	Cleer's Hill (tin), St. Stephen's	0 3 0	—	—	—
3000	Cleveland (iron), [L.]	30 0 0	—	—	—
787	Clijah & Wentworth (tin)	33 10 0	—	—	—
2000	Clova Wood (tin) [L.]	3 0 0	—	—	—
16000	Coalara & Bond [L.] [S.E.]	10700 15s. pd.	—	—	—
50000	Concorre (cop., sulph.) [L.]	1 0 0	26 1/2	—	—
6000	Cornish Clay and Tin [L.]	1 0 0	—	—	—